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PART I

DEPARTMENT OF REVENUE AND AGRICULTURE, GOVERNMENT OF INDIA
L. LIOTARD,
BY

SILK IN INDIA

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DEPARTMENT OF REVENUE AND AGRICULTURE, GOVERNMENT OF INDIA.

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PREFACE

THE sericultural industry in India—once an important one, in Bengal at least—has been declining for many years. The figures of the export trade in Indian silks exhibit a condition of things, says Mr. J. E. O'Connor,¹ “which cannot but be regretted by those who remember or have read of the period when the silk-growing and reeling industry in Bengal was flourishing and the export trade was one of the first importance, and who now see Bengal not only unable to compete in the European markets with China, or France, or Italy, or the Levant, but actually unable to compete with China in the supply of raw material to the silk-weaving industry of Bombay”

Under these circumstances, and in execution of a project which had already been conceived, the following memorandum has been drawn up. Its object is of a two-fold nature, viz. :—

- (1) it aims at giving an account of the sericultural industry in India, and of the attempts made to develop it since the date of Mr. J. Geoghegan's account in 1871-72 ;
- (2) it endeavours to, form a ground-work for the consideration of any further measures that may be necessary for giving a renewed impulse to the industry.

With reference to the second object, occasion has been taken to interpolate particulars relating to the worm and the method of rearing it, and to the supply of food for it, in the hope that such particulars may be of some use in pointing out defects and prompting remedies to those (especially natives) already engaged in the business, and in suggesting the proper mode of operation to those wishing to try the business. Of course authorities on such matters have been consulted, and, where divergence of opinion exists, the opinions have been quoted

It is intended to complete the Memorandum in three parts: *the first part*, which is on the domesticated *Bombyx mori*, or (as commonly known) the mulberry silkworm, is now offered; *the second part*, on the undomesticated worms, commonly called wild silkworms, will follow shortly; *the third part*, which will contain the measures necessary to revive or extend the industry, will be submitted after enquiries which are to be made during the International Exhibition at Calcutta.

The following books and reports have been consulted. —

L'art d'élever les vers à soie, by Count Dandolo, 1861.

Traité de l'Education des vers à soie au Japon, by Sira-Kawa de Sendai (Osyou), translated and prefaced by Léon de Rosny, 1868.

Manuel Pratique de l'Educateur de vers à soie, by Alphonse Taurigua, 1860

Histoire de la soie, by Ernest Panzet, 1862.

Le Cocon de soie, by Duseigneur-Kléber, 1875.

Maladies des vers à soie, by Louis Pasteur, 2 vols., 1870.

Sericulture simplifiée, by B. J. Dufour, 1868.

¹ Review of the Accounts of the Sea-borne Trade of British India for the year 1883 83.

MEMORANDUM ON SILK IN INDIA.

INTRODUCTION.

BRIEF NOTICE OF THE EARLY HISTORY OF THE SILK INDUSTRY.

THE early history of silk culture has been sketched by several writers; among others, by Ernest Pariset, in his "*Histoire de la soie*," 1862; by Léon de Rosny, in his introduction to the "*Traité de l'Education des vers à soie au Japon*," 1868; by J. Geoghegan, in his "*Account of Silk in India*," 1873¹; and by Duseigneur-Kleber, in his "*Cocon de soie*," 1875.

So far as evidence goes, there seems to be no doubt that China is the country where the industry originated. The Chinese historians carry back the use of the product of the silkworm to the period of the myths; and, among annals which relate to the time of Fouk-hi (a century before the date usually assigned to the biblical deluge), silk is mentioned as being in use in the making of sounding cords for the musical instrument called *kin*, which was a sort of lyre with 27 cords.

Later on (2,693 years before the Christian era) the Empress Siling-chi, wife of the celebrated Hôangti, is shown not to have disdained to share in the labours attending the care of the insect, as well as in those of the loom, the invention of which seems to be attributed to her, and to have raised her to the position of a tutelary genius with altars of her own. From this time silk is frequently mentioned in the sacred books in which Confucius embodied the annals of China; and it is abundantly shown that sericulture was continued without any break. The original cradle of the industry appears to have been the north-eastern parts of China, and to have comprised the tracts which now form the provinces of Shantung and Honkouang and northern part of Kiang-su. It now extends to the whole of China, excepting perhaps the extreme northern limits.

From China as a centre, the industry gradually radiated, till it covers, at the present day, a number of very widely-distributed areas of very diverse climatic conditions. Duseigneur-Kleber gives a brief statistical review of the development and general course of the industry in every country of the world, especially during the present century.

Our object is confined to India. The date of the introduction of the silkworm into India has been the subject of some research and discussion by Pariset de Rosny and other writers; but the question still seems an open one. A Sanskrit word *kausheya* or *koushika*, meaning silk,² occurs in the *Râmâyana*, the *Mahâbhârata*, and the *Laws of Manu*. In the *Râmâyana*, the first "edition" of which was penned about 1,400 years before the Christian era, Sita, the betrothed of Rama, is dressed in a yellow cloth of silk; the daughter of the king of the Videhous receives among other gifts soft silk cloths; the women of the

¹ Reprinted in 1880.

² And derived from the Sanskrit *lôsa* or *lôsâ*, which means a cocoon or egg — *L. L.*

CHAPTER I.

DIFFERENT KINDS OF SILKWORM; PHYSIOLOGY OF THE WORM, AND NATURAL CONDITIONS SUITABLE TO IT . . . . .	3

SILK-PRODUCING insects¹ belong to the natural order *Lepidoptera* in the classification of the animal kingdom, and are divided into two families called *Bombycidae* and *Saturniidae*, both of which comprise several species. The latter (*Saturniidae*) comprise eleven genera under which are reckoned nearly four hundred species, including such worms as the tusser, moonga, eria, and others, and will be dealt with in the second part of this Memorandum. The former (*Bombycidae*) comprise four genera, *viz.*, *Bombyx*, *Theophila*, *Ocinara*, and *Trilocha*. The first of these four genera consists of six species found in India and known as "domesticated," and the other three consist of nine species found in India and known as "wild." The nine known as wild are in India:—

[illegible]

and will be further noticed in the second part. The six known as domesticated are in India':—

Bombyx mori (Linnæus).—The common silkworm, domesticated in China, Bokhara, Afghanistan, Kashmir, Persia, S. Russia, Turkey, Egypt and Algeria, Italy, France, and Spain, in all which countries it produces but one crop annually, spinning the largest cocoon and the best silk, of a golden yellow or white.

Bombyx textor (Hutton).—The *Boro pulu* of Bengal, domesticated in S. China and Bengal, an annual only, producing a white (sometimes yellow) cocoon of a different texture and more flossy than *B. mori*.

Bombyx sinensis (Hutton).—The Sina, Cheena, or Small Chinese monthly worm of Bengal, partially domesticated in Bengal, where it was introduced from China; produces several broods in the year, cocoon white and yellow.

Bombyx crasi (Hutton).—The *Nistri* or *Madras* of Bengal, introduced from China; domesticated in Bengal; yielding seven or eight broods of golden yellow cocoons in the year; of larger size than *B. sinensis*.

Bombyx fortunatus (Hutton).—The *Desi* of Bengal, yields several broods annually, spinning the smallest cocoon of a golden yellow colour.

Bombyx arracanensis (Hutton).—The Burmese silkworm, domesticated in Arracan, said to have been introduced from China through Burma; yields several broods annually; cocoons larger than the Bengal monthly species.

It will be observed from the above notice that some of these species spin their silk once in the year, while others spin more than once. The former are known as univoltine, and the latter as polyvoltine or multivoltine. Some

¹ See "The Wild Silks of India," by Thomas Wardle, 1881.

the openings become nearly blocked, and this renders respiration difficult; hence one of the chief reasons for providing sufficient space in rearing establishments.

The ages of the worm are marked by a state of somnabulance called moulting, into which it falls. On waking the worm changes its skin. This is indispensable to its growth, for, while the worm grows rapidly, not so the skin; therefore when the skin begins to tighten the worm, it leaves off eating, exudes from different parts of its body a fluid which, immediately becoming a silky fibre, it attaches to the surrounding objects for the double purpose of avoiding any roll or fall during its somnabulance, and of attaching the skin so that when it crawls out of its old covering the latter might remain fixed to the spot. The attaching done, the worm remains in its somnabulant state for two or three days; it then begins to move its head; it makes contortions, the skin over the head bursts; it pushes forward, and finally crawls out of its old skin. The worm is then of a pale colour, and very delicate. If food be properly provided, it begins to feed immediately, and soon gains in strength and size. Four such moultings take place before the worm comes to its full maturity. After the fourth, *i.e.*, in the fifth age, the worm devours four times as much food as during all the four preceding ages put together. It then ceases feeding, becomes agitated, seeks a place to rest where it contracts its skin, and aided by this motion it pours out through two apertures near the mouth a fluid which in contact with the air immediately becomes a thin fibre. This double fibre is covered with a glutinous matter something like yolk of eggs that causes the two to unite and form one. The result is what is known as silk. With this silk the worm forms around itself (technically "spins") a covering and protection of a somewhat oblong shape known as the cocoon, and then changes itself into a pupa or chrysalis, and remains inside its silken cell. When its hybernation is ended, it becomes an imago or perfect moth; it then emits a fluid which softens the end of its cocoon cell, and, by means of its wing spines and legs, parts the fibres aside until the opening is large enough for it to creep out. After a short time its wings expand and dry, and it enters its perfect state. It lives only a few days in this phase of its existence, during which it couples and the female lays her eggs.

It will be seen from the above that the silk-producing insect is subject to three transformations. In the first, it passes from an egg to a worm; the worm has no progenitive organs; its sole business is to feed and make its cocoon. In the second, it transforms itself from a worm to a chrysalis, and lies shrouded in its silken cover or cocoon. The chrysalis is killed by heat or steam and dessicated; and the silk is reeled off. If allowed to gain its third phase, the chrysalis becomes a butterfly or moth, and issues out of the cocoon as just explained: during this phase it does not feed and has no digestive organs; its sole purpose is propagation.

The eggs remain during different lengths of time (according as they are the product of univoltines or multivoltines), and then burst, giving birth to a fresh generation of worms; and so on.

Sound eggs may be generally known by their dark-grey colour, a slight depression in their centre, and their firm adhesion to the card on which they have been laid. (*Dickins*).

One moth lays from 400 to 500 eggs. Thirty thousand eggs weigh one ounce, says Mr. Coote, while Dandolo says 40,000. One hundred to 120 female moths would therefore produce an ounce of eggs.

One ounce of good eggs should, says Dandolo, produce from 100 to 120 lbs. of fresh cocoons; and Mr. Dickins mentions 120 lbs. as the produce of 1 oz. This is probably too much for India, where, owing to the smallness of the cocoons, the quantity is given generally at 82 lbs. (or one maund) of fresh cocoons to each

CHAPTER II.

FOOD OF THE DOMESTICATED SILKWORM: THE MULBERRY.

THE supply of leaves for food plays an important part in the rearing of silkworms, and on it depends to a great extent the quantity and quality of silk that may be obtained. It is therefore of the first importance to take the necessary steps to provide a suitable supply of leaves. Different species of the silkworm require different kinds of leaves. The species (mulberry worm) which is that under notice feeds only on the leaf of the mulberry tree.

This tree, which in botany belongs to the natural order Urticaceæ and is classed in the genus *Morus*, has, by its many species and varieties and their queer peculiarities, exercised the botanical knowledge of experts; and there is even yet a divergence of opinion and discordance in classification—some botanists considering as a distinctive species what others look upon as a mere variety, and *vice versa*, and others giving different names for the same kind.

M. Bureau, in Vol. XVII of *De Candolle's* Prodomus, recognises five species only, of which one, called *M. alba*, is made to include a very large number of varieties, several of which have been described by other authors as so many species.

Mr. J. F. Duthie, Superintendent of the Saharunpore Botanical Gardens, considers¹ that the specific name "*alba*" becomes incorrect when used to include all the varieties described in the above work, as the fruit of many are as often dark-coloured as they are white.

Dr. Brandis,² probably recognising the impossibility of distinguishing what may now simply be the effects of cultivation, leaves unclassified most of the varieties he mentions (dark as well as white), and leans to the opinion of one species, when he says:—

"It remains for further inquiry on the spot which of these varieties should be classed under *M. alba* and *nigra*, and it is not impossible that it may, in the Punjab and Afghanistan at least, be found impracticable to maintain the distinction between the two species."

Dr. Stewart considered *M. indica* as merely a variety of *M. alba*. Captain Hutton found that seeds, although gathered from the same tree, would often produce several varieties, and said, "I have not only obtained a *M. alba* from the seeds of the black or deep purple *M. nigra* and *M. chinensis*, but three trees of reputed *M. alba* from Kashmir yielded white fruit for four years, and then became purple-fruited."

Instances may be multiplied, but the above are sufficient to indicate the difficulties of classification, and consequently those of tracing the origin of any particular tree or trees found in particular localities in India, where no trustworthy record exists of previous arboricultural efforts. Neither is it necessary for our present purpose to enter into any lengthy scientific disquisitions.

In Europe (particularly in France and Italy) the "black mulberry" was much used in sericulture in former times, and Duseigneur-Kleber brings evidence from several authors of different periods establishing this fact, and showing that the worms fed with the leaf of that kind of mulberry were more vigorous than those fed with the white tree; that the leaf of the black mulberry was dearer; that it was preferred; that subsequently preference was given to the white because it leaved earlier, and its leaf was more tender; that later on (about 1750) the system of budding, manuring, and short bushes came into

¹ Proceedings, Government of India, March 1880 (Agriculture).

² "Forest Flora of North-West and Central India."

"*M. serrata* [Roxb.] (*M. pabularia*) [Decaisne].—Vern.: *Kimu* in North-Western Provinces, *Arun* in the Punjab. A Himalayan tree, common at from 2,500 to 9,000 feet. It flowers from April to May; the leaves break in May. It has a long purplish fruit, which ripens from June to August. The leaves are coarse. Its cultivation at a lower level might develop good qualities.

"*M. lavigata* [Wall.] (*M. glabrata*) [Wall.].—Vern.: *Tūt*. Moderate-sized tree; leaves large, smooth, cordate, acuminate, sometimes lobed; fruit long, cylindrical, whitish or pale purple, sweet but inspid. Wild and cultivated on the Himalayas from the Indus to Assam, also in Burma. It flowers from November to March, and the fruit ripens from March to May."

In considering the usefulness of either these or any other varieties of mulberry in the rearing of silkworms, the following points need attention:—

- (a) their suitability for any locality;
- (b) the time when their new leaves unfold;
- (c) the effects of soil and climate on the quality of the leaves as food.

The first point is obvious: different varieties of mulberry do not thrive equally well in all localities; the results therefore which obtain at Saharunpore must not be considered necessarily as applying to a country like Burma, for instance, where the climate is so different.

The second point is of importance, especially in a tropical climate, for, a kind of mulberry which unfolds its leaf comparatively late in spring, subjects the worms fed on it to the great heat of the early summer months, and to its evil consequences on the health and vigour of the worm; while one that flushes earlier allows the rearing of the worms to be completed before the great heat declares itself, and thus to avoid the deleterious effects of the hot weather.

The effects of the soil and climate on the quality of the leaves is another important consideration, and in these appearance sometimes proves deceptive. A tree may grow up luxuriantly, but it does not follow that it is really in such a condition of natural health and suitability for silkworm as characterised it in its native land. It may grow up to be a fine healthy-looking plant externally, and yet analysis of its leaves may prove it to be deficient in those very properties which contribute to the secretion of good silk gum. The worm may find ample nourishment in the fibre of the leaf to enable it to preserve existence and arrive at maturity; but when the season arrives for the formation of the cocoon, it will produce a thin and papery shell, in consequence of a deficiency in the leaf of silk-yielding ingredients.

Count Dandolo specifies the five substances existing in the mulberry leaf, *viz.*,—

"(1) the solid parenchyme or fibrous substance; (2) the colouring matter; (3) water; (4) the saccharine matter; (5) the resinous matter."

and proceeds thus:—

"The fibrous substance, the colouring matter, and the water, save as much of the latter as serves the wants of the animal, are not, properly speaking, nutritive to the silkworm.

"The saccharine matter is that which nourishes the insect, which helps its growth, and which forms its animal substance.

"The resinous matter is that which separates itself gradually from the leaf, and which attracted by the organism of the animal accumulates in it, purifies itself, and fills insensibly the two reservoirs or silk sacks which form an integral part of the silkworm.

"According to the divers proportions of the elements which constitute the leaf, cases may occur in which a greater weight of leaf may prove less profitable to the silkworm, as regards both nourishment and the quantity of silk produced by the animal.

"For instance, the leaf of the black mulberry, which is hard, coarse, tenacious, and is still given to silkworms in some of the warm countries of Europe, such as in divers places in Greece, Spain, Sicily, &c., produces an abundance of silk of which the thread is very strong but coarse.

"The leaf of the white mulberry, which is planted in highlands exposed to cold dry winds, in light soil, gives generally an abundance of silk which is strong, very pure, and of a

Mulberry trees grown in temperate or comparatively cold climates, says Mr. Thos. Dickens,¹ produce more substantial leaves than such as grow in tropical countries.

The tree is propagated in divers ways,—by seed, by budding, by cuttings, by grafting, and by layers. Plants from seed take longest to grow to the size when leaf may be plucked for the silkworm; but according to a French author, quoted by Mr. Lepper, the plants are the most vigorous and resist drought the best. Loudon says that most writers on the silkworm appear to prefer seedling plants, or plants raised from layers or cuttings, to grafted ones. Grafting and budding give trees more productive in leaf and of a more rapid growth, but they have come into disfavour in France and Italy, and even in Japan they do not seem to be practised now. Layers produce a more certain success than budding, but a sufficiently large quantity cannot of course be obtained from the same area. Cuttings are sometimes less prompt and less sure than seed-sowing or budding, except with the *multicaulis* variety; they are chiefly used to obtain dwarf or middle-sized trees or hedges, and are largely practised with the variety just named.

Mr. Duthie reports his experience, and the time of the year when cuttings should be made:—

“Propagation by cuttings has been found to be by far the best and most convenient method for the cultivation of the mulberry; seedlings also produce good plants, but they take longer to develop. Seed, however, is useful for despatch to a distance by diminishing the cost of carriage, and the liability to injury, such as cuttings might be exposed to *en route* through a trying climate. The mulberry is a deciduous-leaved tree, losing its leaves for a few weeks during the depth of winter. At this time the cuttings should be made.”

The nature of soil in which mulberry plantations should be made is described by Dufour as “une terre légère et arrosable.” The French author, quoted by Mr. Lepper, says:—

“The mulberry grows in all soils, but its vegetation is more or less vigorous, and its leaf is more or less good in each. It only refuses to grow in marshy lands, too calcareous, too superficial, and consequently too dry lands. It allows the use of arid pebbly slopes (not, of course, situated on continuous rock). Its produce there is not abundant, but of excellent quality. In rich, fresh, deep soils its leaf is too watery.”

Mr. Dickens says:—

“Cuttings should be planted in any good soil, having no excess of clay or chalk; a mixture of humid gravel and sand is desirable.”

Sira-kawa, in a Treatise on the culture of the Mulberry in Japan (translated from the Japanese into French by Léon de Rosny), says:—

“When a large mulberry plantation is to be made, land must be selected around the habitations of peasants, on the elevated borders of ravines, or generally in fields where the soil is not stiff. The plants will without fail grow up perfectly if on soil mixed with sand. The mulberries will come up in abundance on the borders of streams, if they are planted in places where the water does not stagnate. If they are planted on sandy soil mixed with fertile soil a little damp, they will soon reach their full growth.”

“On the other hand, it must be known that failure will be the result if a soil is chosen which is not damp, a place where the soil is dry, or where the soil of reddish colour, would suit the culture of sweet potatoes or tobacco. In such kinds of soil, it is not possible even in five years to obtain mulberry trees comparable to those of two years’ growth in soils such as are suitable; and even if continual manuring be given in unsuitable soils, one will never be able to rear any large quantity of worms.”

In Loudon’s “Arboretum et Fruticetum Britannicum” (Vol. III), quoted by Mr. Duthie, the following remarks appear:—

“The white mulberry is more tender than *M. nigra*, and requires more care in choosing a situation. Calcareous soil is said to produce the best silk; and humid situations, or where

¹ “Guide to Sericulture.”

² The white mulberries delight on sloping well-sheltered soil, such as hill sides, or along the foot of walls exposed to the east, &c. The black mulberries succeed in soils which are rather rich and damp—*L. de Rosny*.

care is necessary in these operations, in such a manner that would needlessly bleed or injure the tree.

In pruning, cutting, or heading, the main object is to preserve the equilibrium of the heads, so that the leaf may be equally distributed through the branches on every side. In this regards the production of a crop of leaves of equal quality on every part of the tree.

Mr. Dickens, writing on the subject that may be obtained, says:—

"A very young tree will yield 5 or 6 lbs. of leaves; but as it grows older the crop will increase to 100 lbs. or more."

Mr. Lepper says that 65 seers of leaf may be had from each tree per annum; from this he deducts 15 seers for loss and wastage, and calculates that 50 seers is the net supply of leaf per tree, and that one acre will produce 102½ maunds of leaf annually. Two chittacks (= 4 oz.) of eggs would, he adds, require an acre of such trees planted 23 feet apart, or, in other words, the worms from 4 oz. of eggs would eat 102½ maunds of leaf; therefore 1 oz. of eggs would require nearly 26 maunds of leaf. He then proceeds—

"... Two chittacks of eggs should produce 3½ maunds of green cocoons, worth Rs. 30 per maund, if good, or value of one acre's produce planted as above, Rs. 95.12. But this planting at such a wide distance is to allow of cultivation of other crops between the trees."

"If, then, the acre be planted about 12 feet by 12 feet, one acre should produce about 12 maunds of green cocoons, value Rs. 30 per maund, if good, or say total value of one acre's produce would be Rs. 360 per acre! What other cultivation can offer such a return for only two months' work in the whole year—off land unfit for almost any other crop? Of course, there are risks in this as in every other pursuit depending upon circumstances over which we have no control. In this climate, however, and with such suitable conditions as there are to hand, the very home of the mulberry (unlike France, to which it was exotic), and with healthy imported eggs, the risks of sericulture, apart from the faults of carelessness and inattention, should be reduced to the minimum."

Plantations should be near the rearing-sheds, to ensure economical watering and freshness in the leaf supplied to the worms. To those, therefore, who are desirous of taking up sericulture, the advice is offered that they have a shed for their rearing-sheds on the mulberry plantations.

The best place for storing the leaves when plucked is, where the bungalows are, in the ground floor or under the rearing-sheds:—

"A cool and even damp place should be chosen, which should be such that they receive scarcely any light and little air. These conditions prevent the leaves from spoiling. But the leaf should be placed on planking or any article which will keep it in contact with the ground. The reason for this is that the leaf must not be exposed to the sun; and sometimes a slight fermentation may arise. If leaves, deposited in these conditions on the ground of a damp earth, are exposed to a large quantity of humidity, perhaps of more or less deleterious gases, and consequently, the health of the worm, which delights above all in fresh air, is injured. The conditions of salubrity and aération. Do not keep the leaves more than 12 to 15 centimètres at most, and shake it to prevent fermentation."

Mr. Lepper writes much in the above sense, and says that leaves can be preserved two or three days in cool places, such as in cellars, not too stacked, and are turned from time to time, and a little moist, are

Leaf covered with rust or blight can be used, if it is possible to obtain better leaf; but if not, it should be well washed and dried.

age, during which period they will have consumed from 10 to 15 pounds of leaves. The leaves must have no superficial moisture; if gathered wet, they must be outwardly dried.

Second age.

About the sixth day the worms will cease eating for twenty-four hours, and cast their first skin. They must then have a meal of chopped leaves, and be carefully removed to clean trays providing about 16 feet as the allowance of space.

The usual plan for feeding and maintaining cleanliness is to transfer the worms from tray to tray by means of fine and light nets, having meshes of such spaces as will allow the worms to pass through. At feeding time place over the worms a suitable net of fine cotton, woollen or silk, upon which are spread very evenly the finely cut leaves; the worms will quickly pass through to their food. When the next feeding time arrives (if it be then desirable to remove them for the purpose of clearing away, their refuse and excreta), remove the net and the worms upon it, by the aid of two light rods used as stretchers,—very few worms will then be found to have been left behind. In this manner a large room full of worms may be properly attended to by one person. During this age the worms must be fed as regularly as in the first. The quantity of leaves consumed will be from 20 to 30 pounds. The space allotted to the worms must in this and the following ages be increased in proportion to their size, always taking care that there is no overcrowding. Ventilation must now and henceforth be most carefully maintained, and likewise an equal temperature in all parts of each room, as near as may be to 70 to 75 degrees; the hygrometer should show that there is no excess of humidity.

Third age.

About the eleventh day the worms will again cease eating, and change their skin. Treat them as before. Increase the space for feeding to about 36 feet, and transfer them more frequently to fresh and clean trays. Continue the same regular meals. During this age they will consume from 60 to 80 pounds of leaves, which need not be cut so small as at an earlier period.

Fourth age.

About the seventeenth day another moulting commences, and now the worms grow rapidly and eat voraciously; their excreta becomes considerable and their exhalations very copious. Constant cleanliness, gentle currents of air, and perfect ventilation, to carry off all noxious vapours are now absolutely necessary. The worms become singularly sensitive to impurity of any kind. Their appetite is in proportion to their health. It should be remembered that the quantity of silk they will produce depends entirely upon their condition, and the quantity and quality of their food; they should have no other leaf than that of the *Morus alba*. During this age they consume from 120 to 160 pounds, and will require 80 to 90 feet of space.

Fifth age.

About the twenty-second day the worms complete their fourth age. Unremitting care and attention must still be bestowed. The leaves need not be chopped, but extra precaution must be taken to preserve cleanliness and proper hygienic conditions. The worms now eat voraciously, and will require at least five or six meals daily. During this period the consumption will reach 1,100 to 1,200 pounds. The allotted space should be 200 feet. About the tenth day of this age the worms will have reached their perfection; will cease eating, become restless, and commence seeking a convenient place for the construction of their cocoons, for which most important operation preparations must be made beforehand. Prepare common broom or brushwood in small bundles, fasten these round the trays, and inside in rows, in such manner as to form hedges fifteen to eighteen inches high, then place the matured worms in the intervening spaces, and they will mount the twigs and select their own berths. Do not handle the worms at any time. Should any appear disposed again to feed they should be supplied. The temperature may be reduced to 70 degrees. If the worms have been properly educated, they will have consumed about 1,500 lbs. of leaves.

The sixth or chrysalis age.

The cocoon is commenced about the thirty-second or the thirty-third day, and completed in four days. The worm then shuffles off its caterpillar skin, and becomes a chrysalis within its silken shroud. In another four days the cocoons may be carefully removed from the twigs for further treatment. One hundred and twenty pounds of cocoons should be produced from one ounce of good seed.

Reeling

This operation, although simple, not costly, and conveniently performed by women and children, requires careful special training and much experience, so that the operatives may become accustomed to the touch and manipulation of the fine filaments. It is therefore strongly urged that silk-growers do not attempt this process until they shall have successfully carried out the plan recommended for producing and exporting cocoons. Good cocoons will realise far more than silk defectively reeled from them.²⁰

importance. Indeed, in Nuddea and Jessore there seems to be but one filature in each district; in both cases towards the northern boundary. The area over which the industry now extends is probably less than it was fifty years ago, when it seems to have spread further to the east and north into Dinagepore, Rungpore, Bograh, and Pubna.

"Mr. Skrine, Assistant Magistrate, has supplied an interesting account of the industry in the district of Rajshahye. There are 34 filatures owned by Europeans and 63 owned by natives, or 97 in all, containing 5,760 basins and employing between 11,000 and 12,000 hands. Mr. Skrine estimates the yielding of raw silk at 5,000 maunds, *communibus annis*, and believes that no less an area than 150 square miles is under mulberry, while a quarter of a million of people derive their support from the trade in one or other of its branches in this one district alone. In Maldah, the Collector estimates the value of the trade in raw silk and cocoons carried on at the weekly market held at Amaneegunj at two lakhs of rupees a week. I think this estimate (from which, be it remembered, is excluded the value of the cocoons supplied to the European filatures, which are obtained by private contract and not in the open market) must be very greatly exaggerated. Mr. Hunter (*Annals of Rural Bengal*) estimates that the silk industry in Beerbhoom supports 15,000 persons, and puts the yearly value of the silk manufactures of the district at 16 lakhs of rupees. For other districts even conjectural estimates are not forthcoming.

"The assertion of the degeneracy of the worm dates, as we have seen, from many years back. Mr. Atkinson's natives declared that (in 1796) the yield of the *lara palu* had diminished 50 per cent. The preponderance of authority is certainly in favour of the view that the Bengal species have degenerated; but the subject does not seem to have been very carefully investigated, and Mr. Turnbull of Ghattal maintains that the fact of degeneracy has yet to be proved. Most of those engaged in silk manufacture assume this point and confine themselves to discussing the remedies. These are various. It seems generally admitted that the attempts to introduce exotic breeds have not of late years succeeded. It would also appear that, though there seems to have been a large mortality among silkworms, no epizootic such as the 'muscardino' and the 'prebine,' which have devastated France and Italy, has as yet appeared in India. M. Gallois of Midnapore appears to think the cause of degeneracy may be in the mulberry being too long cultivated in one spot. M. Perrin of Berhampore, on the other hand, extols the native mulberry cultivation as careful and judicious. Mr. Marshall urges an attempt to improve the stock by offering prizes for the best-bred cocoons, and the distribution of tracts in the vernacular on the best method of selection. Most authorities agree that the natives stint on the worms, and Mr. Atkinson long ago saw the difficulty of dealing with this tendency on their part. Mr. Malcolm of Ramnagar, in the Kandbi sub-division of Murshedabad, maintains that the worm has been injured by being forced into unduly rapid reproduction of itself; that whereas '20 or 25 years, ago,' there were but four breeds or 'bunds' in the year, there are now from six to eight. It may be that the worm has been forced in this direction, but I do not find that the 'bunds' are anywhere given as less than five, even so long as 50 years ago.

"I have not been able to obtain much information on the present state of silk manufacture in Bengal. The exports show that the industry still survives, but in a languishing condition. The Maldiki cloths, described by Buchanan, are still woven in the decayed old town, and the 'corahs' of Baluchar and Murshedabad are still well known. In Bancurah, Bishenpore, sundry towns in the Burdwan and Hooghly districts, and Bhagulpore, weavers are still to be found, and some of the patterns in bright and boldly contrasted colours are striking enough. Dr. Forbes Watson's illustrative list contains but four samples from Bengal of fabrics employing silk in their construction, *viz.*, two of silk piece-goods from Bhagulpore and Berhampore, a specimen of gold embroidery on silk from Murshedabad, and one of the tasteful silk embroidery on muslin from Dacca."

Twelve years have elapsed since the above account was written, and for the silk industry of Bengal the period has been one of a continual struggle to preserve its life principle. It is a matter of some difficulty to obtain a complete and trustworthy picture of the present state of the industry, and the following paragraphs are all that can at present be learnt.

The cultivation of the mulberry and the rearing of the worms are conducted by the peasantry themselves by two different classes of people who are under no obligation, but their own interests. The destination of the cocoons is two-fold: they are as a rule either sent to small native filatures where the silk is roughly wound and usually consumed in the hand-loom of the country or

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or are reeled by the rearers themselves, who most of them have one or two reels: the silk reeled by the natives and called *khangru* is partly bought by silk-piece manufacturers of Bombay, Benares, Delhi, Mirzapur, &c., and partly is used in home manufacture for corahs, masru, and other kinds of cloth. These cloths are mostly exported to Calcutta, Bombay, Madras, Nagpore, Allahabad, Benares, and Delhi (the largest exports being to Calcutta and Bombay), and partly worn in the district. A very large proportion of the cocoons reared in the district are reeled into this silk (*khangru*) in the small native filatures; it commands a uniform rate of between Rs. 11 and 13 per seer of 80 sicca weight, and the price of cocoons is regulated by the market rate for the native silk.

In Birbhum, silk is now produced in the eastern part of the district only. One European factory owned by Lyall & Co., says Dr. Hunter, gives employment to about 15,000 people, and turns out silk to the value of £160,000 annually, which is usually sold in the raw state, and finds its way to the Calcutta and European markets. The number of people employed and the value of the outturn are probably both exaggerated; at any rate the figures do not represent the present condition, for the industry has declined considerably. There are also numbers of small native filatures whose reeled silk is either consumed in the local manufacture of piece-goods, or sent to Murshedabad and the silk-consuming towns of the North-Western Provinces and the Punjab, and to Bombay. But the native reelers and weavers (says the Commissioner in a recent letter) are labouring under the disadvantages arising from want of capital and the competition of foreign goods.

In Midnapur Messrs Watson & Co. have four factories, and natives have three; but the business does not apparently pay as well as it did before, and the industry has in this district declined more than elsewhere; the cocoons, too, are more inferior than those of the other districts, although some say that they are superior.

In Nuddea the industry is reported by the Commissioner to have become almost extinct; there are one European and several small native filatures, but the business is not a very flourishing one.

In Bankura, cocoons are reared on a very small scale by petty capitalists, but the quantity of silk produced is not sufficient for local demand, which is mostly met from imports from Singhbhum. A stuff called *lutra* (a texture of cotton and silk) is made to some extent.

Bogra, once famous for its silk, now possesses a lingering industry; the few cocoons now reared are mostly exported to Rajshahye to be worked up there; the worm-rearers and mulberry-growers are distressed. The Rangpore silk industry is confined to the south of this district, whence about 300 cwts. of cocoons and 50 cwts. of raw silk are annually exported.

In Cuttack, sericulture has been carried out as an experiment since 1877 at Government expense under the supervision of the Executive Engineer of the Mahanudi division, and the result after four years' trial is shown in the following table:—

Amount expended.	Quantity of outturn.		Value of outturn.	No. of mulberry trees planted.	
	Sr.	Ch.	R. s. p.		
Government outlay, including Superintendent's charge for two years, Rs. 3,005½.	Silk.	6 15	318 11 0	2,378	in 1877-78.
	Chussum	20 14		2,667	„ 1878-79.
	Cocoons.	1 0		10,973	„ 1879-80.
			TOTAL.	16,018	

The position which Bengal silks hold in the London market will be seen from the following statement of the average prices of silk there during the last three years :—

Silk	AVERAGE FOR 1881		AVERAGE FOR 1882		AVERAGE FOR THE 1ST 6 MONTHS OF 1883	
	Price per lb		Price per lb		Price per lb	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Milan (Italian)	23 3	27 3	23 0	23 0	23 2½	26 7
Piedmont (Do)	24 3	26 6½	25 0	27 5	23 7	25 9
Trent (Do)	21 9	24 8	22 0	26 0	21 4	24 8
Patent Bratia	21 ½	24 6	21 0	25 0	21 0	25 0
Japan Low to fine	15 8½	19 0	14 7	19 6	13 6½	18 0
China Tassle No 3	17 0	17 6½	18 4	19 4	...	...
Sardah (Bengal)	16 3½	17 8½	16 4	17 1	16 0	16 11
China re-reeled	14 10	17 0	0 0	...	...	...
Tayasann (China)	11 2	16 6½	12 5	17 10	10 8½	16 11
Goutas (Bengal)	15 3½	16 8½	15 6	16 4	14 11½	15 10½
Co-simbazar (Do)	14 0	16 8½	15 1	16 4	14 3½	15 7
Madagore (Do)	14 4½	16 7½	15 3	15 9	...	...
China Tassle, Nos 4, 5, &c.	13 2½	16 1½	14 5	16 7	13 0	16 0
Jungeypore and Coomercolly (Bengal)	13 3	15 8½	13 3	14 8	12 11½	14 4
Canton (China)	11 11½	15 1½	11 8	15 7	9 10½	14 7½
Longreled (Do)	10 0	12 3½	11 5	13 8	10 10½	12 8
Persian . . . . .	...	...	8 3	10 5	7 11	10 4½

It has been said that there is now no hope of amelioration in the Indian silk trade except in the failure of the seasons in countries competing with Bengal.¹ This is probably an unfair view of the Indian silk industry. But the question appertains to Part III, and will be dealt with there as sketched in the Preface to this Memorandum.

For the present, some remarks made by Mr. J. E. O'Connor in his Review of the Maritime Trade of British India for 1880-81 may appropriately be quoted here :—

"It is curious," he says, "that in Bombay, which has to depend upon imported raw material, the silk-manufacturing industry has taken comparatively large and active proportions; while in Bengal, the very centre of Indian silk production, there is not a mill to be found. The Bombay mills manufacture in considerable quantity for the Burmese market, which is much closer to Bengal, and there is also a large market in the Upper Provinces for the output of silk looms. Yet Bengal is contented to produce raw silk in annually diminishing quantities for an unprofitable export market, and confines its manufactures to a few corahs and other similar goods made by hand. There is unquestionably in Bengal, as compared with Bombay, a want of enterprise which is very noticeable."

In this connection it may be noted that two or three years ago a *nakoda* (native Arab merchant) started a weaving mill at Sealdah, near Calcutta, where he now makes silk cloths specially for the Burma markets. His business is, I am told, in a prosperous condition.

The Government of Bengal recently turned its attention to the silk industry; and, in view to raise a spirit of emulation among the native-rearers, reelers, and spinners, proposed to the district officers to have an exhibition of silks in the province. Some of the officers consulted doubted in the efficacy of the proposal, and others believed in it; the preponderance rested in favour of such shows: the grounds were that ryots and spinners would benefit by the improvement which the spirit of emulation would induce; that better silk would be produced and a better market obtained; and that zemindars would benefit largely from the improved position of their tenants. Some of the local officers went further and said that the exhibition should be

¹ Probably because when the silk crop in France and Italy or in China are bad, an improvement immediately takes place in the Indian silk market for export. Thus two or three years ago there was an actual improvement in Bengal silk trade, owing to bad crops in France and Italy, and silk made an important rise, the advance at the height of the movement being quoted in trade circulars from England at 70 to 80 per cent. in China silk, 100 per cent. in Japan silk, and 90 per cent. in Bengal silk.

the rest would be reeled off and sold by Government in the best market. For the reeling operations competent reelers would be procured from Bengal.

These proposals were submitted by the Government of the North-Western Provinces to the Government of India in March 1872, with an enquiry whether the Governor-General in Council was disposed to sanction 'experimentally' the establishment of a farm under Mr. Ross's management for sericultural operations.

After some hesitation and further correspondence, in which among other points Mr. Ross explained that he proposed to go on with the yearly worm only,—that the Goorkha Regiment and its pensioners with their families were all anxious to take up the experiment,—that rather than lose Captain Murray's stock he had, at his own personal expense, bought up that officer's outturn, from which he obtained 12 lbs. of eggs besides 100 lbs. of cocoons for reeling,—the Government of India, in August 1872, sanctioned the outlay of Rs. 300 "to defray the cost of an experiment in sericulture in Dehra Dún." It now even went further by promising such additional moderate allotment as the Lieutenant-Governor might consider desirable and necessary to give the experiment a fair trial.

It has just been mentioned that Mr. Ross explained that he purchased Captain Murray's outturn, which gave 12 lbs. of eggs and 100 lbs. of cocoons. Towards the end of December 1872, however, when reporting further proceedings, Mr. Ross stated having purchased 2 maunds of cocoons (=168 lbs.) and 10 lbs. of eggs.

Owing to press of other work, Mr. Ross allowed the cocoons to lie "chiefly out in the sun" for upwards of five months. One maund of them was then sent to Calcutta to be sold in open market, and the other maund was divided into lots and sent to different places to be reeled.

The account connected with the open market sale was as follows:—

	R	a.	p.		R	a.	p.
Price in Calcutta of the maund of				Cost of rearing the maund, including			
(dry) cocoons	120	0	0	interest of money sunk in build-			
Packing cloth sold	1	0	0	ing and plantation	40	0	0
				Packing	4	0	0
				Carriage	18	0	0
				Commission and incidental charges	14	0	0
				Loss on exchange	2	8	0
				TOTAL	78	8	0
				NET PROFIT	42	8	0
TOTAL	121	0	0		121	0	0

The net profit was handsome. The broker reported that if the cocoons had only arrived in a fresher state, they would certainly have realised Rs. 140. Mr. Ross concluded from this account that it would pay any one to undertake sericulture in the Dún; and, having purchased the cocoons at his personal expense, he apparently kept the proceeds for himself.

The other maund of cocoons which was distributed for reeling was also reported on favourably. Among others a gentleman at Rajshahye, who reeled the silk, reported that its quality "was pronounced by a French gentleman, who is manager of a large silk concern, and by native dealers, to be good and above average, but rather harsh and high coloured. These faults were due to the considerable amount of boiling the cocoons required before they would reel off." The silk was valued at Rs. 18 per seer, when Bengal-reeled silk was fetching Rs. 16. Mr. Ross did not mention the cost of reeling, nor the amount of silk reeled; and, as with the proceeds from the cocoons, he apparently kept also those from the reeled silk.

good grounds for believing in the practicability of producing good silk in the Dún. Following up the first successes, Mr. Ross about this time (July 1875) submitted certain proposals in view to developing the experiment. The principal proposals were:—

- (1) to lease for five years a certain plot of land measuring 80 to 90 acres on which a sufficient supply of three or four varieties (undefined) of mulberry trees, besides some suitable buildings, existed;
- (2) to procure 5 oz. of silkworm eggs from Japan;
- (3) to procure 30 oz. of silkworm eggs from Kashmir;
- (4) to import three Japanese silk-reelers on an engagement of four years and a salary of Rs. 30 per mensem, the men being provided before they left Japan with reels and any other implements;
- (5) to employ Lieutenant-Colonel Ouseley, of the Oudh Commission, then at Mussoorie on two years' furlough, as overseer of the plantation on a salary of Rs. 100 a month, in addition to his furlough pay, during the continuance of his leave;
- (6) to employ a clerk to keep the accounts on a pay of Rs. 20 a month;
- (7) to erect a factory and sheds, as also house and out-offices for overseer, at a total cost of Rs. 6,100.

These proposals and other contingences were estimated to cost in all Rs. 25,876 during four years; and the Local Government, in recommending them to the favourable consideration of the Government of India, expressed readiness to meet the expenditure from Provincial Revenues. The Government of India in September 1875 approved the proposals at a cost not exceeding Rs. 30,000; it also sanctioned the appointment of Colonel Ouseley, and addressed the Resident in Kashmir for 10 oz. of eggs (instead of 30 oz. as proposed) to reach the Dún not later than the first week in December, and Her Britannic Majesty's Minister in Japan for 5 oz. of eggs and for the three reelers with implements, the conditions of the employment of these men being altered to three years' service, continuable to five years at the pleasure of Government.

The eggs from Kashmir were despatched to the Dún in October 1875, without apparently any mention of the variety. Those from Japan were received towards the end of December, and consisted of—

	Cost in \$.
2 cards from Joshu in Shimamura	1.40
1 card „ Shinshin in Suzaka . . . . .	.70
1 „ „ Takaigoi in Fukiyaama . . . . .	.70
1 „ „ Yonegawa . . . . .	.70
1 „ „ Oshin in Hobura	1.50
1 „ „ Oshin in Tanagawa	1.60
	<hr/>
	6.60
Cost of box . . . . .	.12
	<hr/>
TOTAL	6.72

The last mentioned was of the kind which produces white cocoons, and the others were of the green kind.

The following directions accompanied the consignment: “On the seed arriving in India, it should be at once sent up into the mountains where the thermometer touches freezing point, and then, as hatching time approaches, it should be gradually brought down through successive grades of temperature towards the mulberry plains.”

person has time enough, to attach the threads. All other apparatus for reeling is the same as by steam, very simple and of little cost.

"Some Frenchmen erected in Japan very large and expensive steam filatures, one of which cost nearly Mex. \$500,000; they had, however, only two or three smaller imitations, whilst my system by fire is covering, in a few years, the whole country, and still the Japanese are a very poor people. By the same result the construction is easy, economical, and can be adopted even by the single peasant, who with the respective utensils is obliged to reel better than before.

"Should the Indian Government be willing to give an impulse to the silk industry in the above-mentioned sense, in my opinion the only salutary way I propose:

"1. To bring from Italy two or three samples of modern filatures, the water heated by fire, which will cost no more than 500 fcs. each, including reel and the necessary utensils, in order that the furnaces traced with wood can be filled up with bricks.

"2. To construct . . . a small filature in Dehra Dún, serving as model for other establishments of this kind. Wood, copper, brass, and iron-work should be made on the spot, or hereby copying the samples I bring with. In this way every basin or reel would cost between 250 and 300 fcs., excluding the building. . . . Perhaps an old building could be used. . . .

"3. I would teach the reeling persons how to use the machines and assist those natives who would build other establishments, travelling in the service of the Government wherever my help should be required."

The Government of India, however, after consulting the Government of the North-Western Provinces, decided upon not availing itself of Mr. Müller's services or of importing experienced foreign reelers. Mr. Müller and the British Minister in Japan were informed accordingly in October 1876, and the former received an honorarium of Rs. 500 as a compensation for having come to Calcutta and been detained there for 35 days.

The operations in Dehra Dún were continued as previously undertaken, and at the end of the official year 1876-77 the position was as follows:—

18 acres of young mulberry trees alive.

40,000 mulberry cuttings alive.

100 old mulberry trees properly pruned and in full bearing.

9 bullocks worth about Rs. 450.

5 carts worth about Rs. 175.

One rearing-shed 75' x 25', thatch, and all in good order.

One bungalow.

2 pukka houses suitable as "hatching" houses.

1 large bullock-shed.

Some out-offices.

3 tanks in good order.

The total amount of money spent was Rs. 8,661.

The silk production, however, proved a complete failure. Mr. Ross is gone on leave; the men placed in charge of the operations knew very little of the business; the silkworm eggs did not hatch in large proportion; the worms of those that hatched died in large numbers, and what cocoons were produced proved to be small and thin. The outturn was about 1½ maunds of dry cocoons which were apparently sold for Rs. 70, and about 30 oz. of eggs which were saved for the following year's operations by the timely return of Mr. Ross. The total receipt, including that from garden produce, was Rs. 400.

To the supply of 30 oz. of eggs, Mr. Ross added 24 oz. procured in

Kashmir in October 1877, and 50 oz.* of varieties from Japan obtained in December.

The operations of this year (1877-78) commenced with a total supply of 104 oz. of eggs

which was all kept at Mussourie until actually required for hatching. In examination the supply is said to have been found to consist of 60 varieties of silkworm, which, however, were not specified.

* These were obtained through the Government of India and the British Consul at Kanagawa (Japan) at a total cost of \$625, including freight, which was \$1.

A hundred of the best cocoons of the year's outturn were sent to Messrs. Thomas & Co., brokers of Calcutta, and were reeled by the manager of a filature, and yielded silk at the following rates:—

White cocoons 10 seers silk per maund of cocoons.

Yellow " 9½ " " "

Green " 8½ " " "

The manager, in communicating the above result, reported that the cocoons spun very well, and that the yellow and white ones gave nice silk, and the green not so good. A dealer in silk offered Messrs. Thomas & Co. Rs. 90 per factory maund for 25 or 30 maunds of cocoons equal to the sample; but as the year's operations had failed, this comparatively large supply of choiced cocoons was not available.

Nine maunds of unselected cocoons were, however, sent to Messrs. Thomas & Co. for disposal. These were also tried by the manager and were reported upon by him as not nearly so large or of such good quality as the selected ones; the chrysalides had either been allowed out of the cocoons or had not been properly killed and desiccated: consequently a large proportion of the cocoons was pierced by the moths or stained, and the silk was not nearly of such a good colour as it would otherwise have been. The manager, however, gave the cocoons every justice by working them off at three different filatures, so as to get the best results possible, and he wrote:—

"If we could get these Dehra cocoons of the same quality as the first musters sent, and properly cured,—that is, chrysalides killed by sun-drying before it cuts out,—we should be able to turn out lovely silk, far superior to Bengal silk."

The silk was sold through Messrs. Thomas & Co., and, after deducting all expenses on account of freight to Calcutta of the 9 maunds cocoons from which it was obtained, as well as reeling and miscellaneous charges, gave a clear profit of about Rs. 77 per maund.

The financial side of the operations of the year was, however, as unfavourable as the rearing had been: the expenditure was Rs. 3,550-6-9 against a total income of Rs. 521-5-6, including garden produce.

This was in the year ending the 1st May 1879. In the middle of 1879-80, Mr. Lepper, representative of the firm of Messrs. Lister & Co. of Bradford (England), arrived, and, after looking over the operations and the results, expressed himself willing to obtain the right of establishing a filature in the Dún and taking over all the Government sheds, apparatus, and mulberry plantations. Government agreed to the transfer; and, while the necessary terms were discussed and the deed drawn up, temporary arrangements were come to by which Mr. Lepper undertook to guide in person the practical arrangements in the sericultural operations, and to take over at a fair price all the cocoons produced; while Mr. Ross on behalf of Government retained the general supervision and the financial responsibility, and allowed Mr. Lepper the use of all the mulberry trees on roads and canal banks, and of all the Government sheds, &c. Government also made advances to villagers willing to take up the industry, the amount of the advances being repaid out of the value of cocoons.

The operations of the year 1879-80 were carried out on this understanding. A large number of men (villagers) came forward, and out of the lot six were chosen as being good trustworthy men: advances to the amount of Rs. 112-11 were made; they turned out 14 maunds 2½ seers of cocoons, and were paid Rs. 562-6 by Mr. Lepper for their produce.

Mr. Lepper, at the time of paying the men who had reared the cocoons, distributed prizes to those who had reared the best, and medals to all who had done anything at all. He also read an address offering further prizes in the ensuing year. The people were much pleased with the prizes and the price they received, and were all anxious to take the matter up the ensuing year.

A hundred of the best cocoons of the year's outturn were sent to Messrs. Thomas & Co., brokers of Calcutta, and were reeled by the manager of a filature, and yielded silk at the following rates:—

White cocoons 10 seers silk per maund of cocoons.

Yellow	"	9½	"	"	"
Green	"	8½	"	"	"

The manager, in communicating the above result, reported that the cocoons spun very well, and that the yellow and white ones gave nice silk, and the green not so good. A dealer in silk offered Messrs. Thomas & Co. Rs. 90 per factory maund for 25 or 30 maunds of cocoons equal to the sample; but as the year's operations had failed, this comparatively large supply of choiced cocoons was not available.

Nine maunds of unselected cocoons were, however, sent to Messrs. Thomas & Co. for disposal. These were also tried by the manager and were reported upon by him as not nearly so large or of such good quality as the selected ones; the chrysalides had either been allowed out of the cocoons or had not been properly killed and desiccated: consequently a large proportion of the cocoons was pierced by the moths or stained, and the silk was not nearly of such a good colour as it would otherwise have been. The manager, however, gave the cocoons every justice by working them off at three different filatures, so as to get the best results possible, and he wrote:—

"If we could get these Dehra cocoons of the same quality as the first musters sent, and properly cured,—that is, chrysalides killed by sun-drying before it cuts out,—we should be able to turn out lovely silk, far superior to Bengal silk."

The silk was sold through Messrs. Thomas & Co., and, after deducting all expenses on account of freight to Calcutta of the 9 maunds cocoons from which it was obtained, as well as reeling and miscellaneous charges, gave a clear profit of about Rs. 77 per maund.

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had been gathered Village rearers, owing to a disagreement in the terms offered, did not come forward when seed was distributed; only two cultivators acceded to the terms, and they took 4 oz. of eggs; the produce obtained by them is not stated.

No reeling was done at Dehra; the best cocoons were reserved for seed, and the rest were dessicated and, together with the pierced cocoons left by the moths, were sent to the branch concern the firm had established in the Punjab.

The formal deed of assignment in favour of Lister & Co. was submitted to the Government of India on the 10th August 1882, and received its approval on the 4th September. The assignment consisted of an area of 3,068 acres of land for the express purpose of sericultural operations, and was made under specified terms, the chief of which were as follows:—

That the assignment would be free of rent for the first ten years; that 8 annas per acre would be paid after that on half the assessable area; and that after the 20th year the whole assessable area would be assessed at the ordinary settlement rates of the district, not exceeding wheat rates.

All wood standing on the land up to a value of Rs. 2,500 would be marked off for the use of the grantees; and all wood over and above that might be purchased by them at its market value, to be fixed by the Forest Department.

All the products (excepting any minerals beneath the surface) would be the right of the grantees.

Bond fide silk operations would be commenced within five years from the date of signing the deed of agreement.

The grantees would not assign the land before the expiry of the first ten years without the written sanction of the District Collector, save to cultivators or tenants under his immediate control.

With this assignment the immediate concern of Government in the enterprise ceased; but it was evident that certain measures could still be taken to encourage villagers in Dehra Dún to engage in the rearing of silkworms and the production of cocoons. The Government of the North-Western Provinces, therefore, at the recommendation of the Director of the Agricultural Department, sanctioned the following programme in November 1882:—

- (1) Two acres of land adjoining the mulberry plantation at Ramgharwala to be taken on lease for five years at a rent of Rs. 40 per annum or less. This to be planted with mulberry trees for distribution to villagers.
- (2) Five malis to be entertained at a pay of Rs. 5 per mensem each to be lent to private persons, tea-planters, or others who, the Commissioner of Meerut hoped, might be induced to co-operate by permitting mulberry trees to be grown on their land.
- (3) One of the principal obstacles to the development of cottage industry being the want of proper rearing accommodation and the expense of erecting it, Rs. 1,500 to be given to the Superintendent of the Dún to be spent at his discretion either in building new rearing-sheds or repairing or improving those at present in use.
- (4) A fair to be held at Dehra the ensuing spring (1883), at which the following Government prizes would be offered:—

Rs. 20, first prize	} for one ounce of eggs, the produce of which will be not less than
„ 15, second „	
Rs. 30, first prize	} for two ounces of eggs, the produce of which will not be less
„ 20, second „	
Rs. 40, first prize	} for three ounces of eggs, the produce of which will not be less
„ 30, second „	

¹ The seers here mentioned are probably the weight of cocoons expected to be produced.

however, were scarce, and as great inconvenience had been felt in consequence, three plantations were made with cuttings from Amritsar and Kashmir, one around the sessions house, one at Lohconwala, and the third at Theri. In 1865 a fresh trial in rearing worms was made: 10 tolas of eggs were obtained from Peshawar for Rs. 3-4; these produced cocoons in June, and 2½ seers of silk obtained therefrom were sold at Amritsar for Rs. 25. Lieutenant Powlet, however, left the district, and the trials were apparently abandoned. On enquiry it was reported in 1873 that the second of the three plantations of mulberry was still in existence, but that the other two had either been destroyed or ploughed up.

In the Kangra district a trial was begun in 1863 by Mr. J. Montgomery with a few eggs. The result pointed to the fact that the worm would not thrive on leaves of the indigenous mulberry. A few plants of the Chinese and Philippine varieties of the tree were then procured from Lahore, and as soon as the first plants could yield a plucking of leaves, Mr. Montgomery tried a small quantity of Italian eggs. Cocoons were produced, of which a portion was valued by the Silk Supply Association in London in November 1870, and was reported on very favourably; indeed the cocoons were considered far superior to what the Association had expected to receive from India.

This encouraging result induced Mr. Montgomery to carry on his trial further, and for this purpose he seems to have obtained a small supply of the best eggs procurable in England. From this supply 120,000 worms hatched between 1st March and 30th April 1872, and apparently not a single one died. Some average specimen cocoons of the year's produce were forwarded to the Government of India, the choicest ones being reserved for propagation. Mr. Montgomery claimed to have proved that silk could, with due care, be successfully reared in Kangra; and in May 1872 he had upwards of 700 trees of the Chinese and Philippine mulberries. The Punjab Government sanctioned an expense of Rs. 200 to provide him with an experienced reeler, and requested to be kept informed of the operations.

The sample cocoons received by the Government of India were transmitted to the Secretary of State for valuation, and the following opinions were pronounced thereon by Messrs. Durant & Co. and by Mr. F. Cobb:—

	<i>Opinion of Messrs. Durant & Co.</i>	<i>Opinion of Mr. Cobb.</i>
1. Dried cocoons from old Italian stock.	Not very uniform in quality; some very good and others poor and inferior; value at 4s. 6d. to 5s. per lb.	Fair cocoons, apparently Japanese, crossed with some other breed, the former predominating, the latter changing the colour, which is not pure. Shows signs of an apparent want of first-class food, or insufficient attention in rearing. Value about 4s. per lb.
		Benugal, but that better races can be reared.

before the first competitive show was held; and it was not before the 22nd April 1876 that it took place. Mr. Halsey took an active part in it and drew up the report, from which the following facts are taken.

There were 98 exhibitors, some of whom came from Nurpur in Kangra, from Majitha in Amritsar, and from Narot. The cocoons exhibited were generally good, showing an improvement over what could be procured in former seasons; but the exhibitors showed a want of knowledge of their subject in bringing samples in an unmarketable form; for instance, many samples contained white, deep yellow, light yellow, green and double cocoons. The exhibitors were of all classes, and fifteen of them received Rs. 1,000 in prizes ranging from Rs. 200 to Rs. 50. The quantity of cocoons exhibited was not stated. For the following year Mr. Halsey suggested that the amount awarded be increased to Rs. 2,000, because after several years of experience he was convinced that the country was eminently suited to the rearing of silkworms, and that the population and Government would derive very great profit from its establishment. He also suggested that a remission of revenue might be granted in the land planted with Chinese mulberry. The Provincial Government, in acknowledging this report, considered the experiment an interesting one, and the result of the exhibition as on the whole promising, and agreed that the conditions under which land planted with timber trees was granted free of assessment should apply to plantations of the Chinese mulberry. The conditions will be found in the Financial Commissioner's book, Circular No. X of 1875.

On the 21st April 1877 a second exhibition was held. There were 164 exhibitors, of which 56 were zemindars and the rest of mixed professions. Of the zemindars 10 carried off prizes aggregating Rs. 600, and of the others 12 carried off an aggregate of Rs. 400. The cocoons shown this year were a considerable improvement over those exhibited in 1876; they had been more carefully selected, and were in a more marketable form; but there was still much room for improvement in this respect. Very few of the exhibitors seemed to know a good from a bad cocoon: even among professional rearers a large loosely formed cocoon was looked upon as superior to a small well-formed and fine-grained cocoon. It apparently never occurred to them to weigh the outturn of silk yielded by these different cocoons; had they done so, they would have found that the latter kind yielded nearly double the quantity of good silk to the former.

Mr. Halsey pointed to the causes which prevented the people from raising cocoons to perfection. These were want of well-aired dry sheds and larger quantities of eggs than the rearer could properly attend to.

"Three hundred superficial feet of room and the care of two individuals are, he wrote, necessary for worms hatched from 1 oz. of eggs, and this would give 40 to 50 seers of cocoons worth from Rs. 30 to 40, whereas the rearers very commonly hatch out from one to five seers (32 to 160 oz) of eggs without perhaps 300 superficial feet of room, and with 6 men in all to look after the worms. The proper thing for one 1 seer of eggs would be 9,600 feet of room and 6½ men to attend, and the produce would amount to 32 maunds of cocoons worth Rs. 960. A man here commonly undertakes this who has not Rs. 5 in the world. Whereas, if 1 man and his son would undertake to raise the worms from 1 oz. of eggs, he might without any cash outlay at all make Rs. 40 to Rs. 50 in 40 days, sufficient to keep him in tolerable plenty for the rest of the year. But, like everything else in this country, the native looks to quantity, not to quality."

Gurdaspore was considered by Mr. Halsey to be situated at quite the most southern limit of the *Bombyx mori*, and in order to escape the great heats which are apt to come on just at the time the silkworm is forming its cocoon, which is the most critical moment of his life, it was necessary that art should be brought to its aid. There was no difficulty in hatching the eggs

would possibly induce people to plant exotic mulberries, and thus improve the quality of the cocoons by having an early supply of leaves.

The Government of the Punjab conveyed acknowledgments to Mr. Halsey for the assistance he rendered in the development of the industry and for his liberality in the bestowal of prizes. It also concurred in the suggestion that the show should be held in future in the first week in April; it laid stress on the necessity of having plantations of the Chinese mulberry; ordered that Mr. Halsey's offer of cuttings be made widely known in the tahsils of Kangra, Nurpur, and the districts of Gurdaspur; accepted with thanks his offer of Rs. 1,000 to be given in prizes for the best plantations of the Chinese mulberry; and observed that this need not interfere in any way with the distribution of prizes for cocoons as hitherto.

The example given in Gurdaspur was soon followed in the Kangra district, and a first exhibition held in May 1877 at Nurpur of this district brought 12 competitors from Kangra and 22 from other districts; the former carried off prizes amounting to Rs. 125 and the latter to Rs. 80; the quantity of cocoons produced was not reported. A second show was held at the same place on the 14th May 1878, and was attended by 70 competitors from the Kangra and 65 from other districts. In this year the quality of the cocoons was far superior to those of the previous year, but were inferior to those raised in Gurdaspur, owing probably to the fact that the rearers had been longer at work in the latter district, and consequently understood their business better.

	Mds.	Srs.	Ch	
The cocoons exhibited amounted to	{ 37	29	4	from the Kangra district.
	{ 2	25	12	„ other districts.
The silk brought was	{ 0	3	12	from the Kangra district.
	{ 0	4	0	„ other districts.

For the cocoons, prizes in cash amounting to Rs. 315 were awarded to 39 of the competitors of Kangra, and Rs. 60 to 11 of those from other districts.

The silk produced was so coarse and inferior that it was not considered worthy of either a prize or honourable mention.

The show appears to have excited considerable interest, and the local officers attributed this to the fact that in this new industry the inhabitants of Nurpur, who had recently been reduced to straightened circumstances owing to a decline of their shawl trade, found a means of relief from their sad position. The tahsildars, zaildars, and kotwals did much in the first instance to bring the people to realise the advantages of the industry, and for this purpose khilluts were awarded to them.

The Deputy Commissioner was very sanguine as to success in the future, and had every hope that the industry would, in the end, afford an easy means of provision as well as an occupation for the children and women appertaining to the poorer classes in the district.

Through the medium and at the instance of Mr. Halsey, 10,000 mulberry cuttings of the China variety had been planted out in the Nurpur and Kangra tahsils.

Some observations made by Mr. Halsey in a note which accompanied the report on the show of 1878 seem worthy of record. He said:—

"The pargana of Nurpur is far better adapted by nature for the purposes of sericulture than the greater part of the Gurdaspur district. There are many tracts of land unfit for cultivation from irregularity of feature and other causes, in which, however, the mulberry would grow, and there is no doubt whatever in my mind that the whole of the land revenue of the pargana could be paid from proceeds of the cocoon crop if only the zemindars could be made to see the advantage to be gained. To a zemindar there is no cash outlay whatever in producing

left off, and on a very much larger scale. I may hear by the next mail for certainty, and the amount they are inclined to give. Should I not, I will write recommending them strongly to do so."

Of the mulberry trees, 6,395 cuttings, apparently of the China and Philippine varieties, were planted out in 1879. Of these, 2,000 died from unexplained causes, and the rest were reported to be flourishing. This extension of mulberry plantation was probably the result of Mr. Halsey's efforts.

In the Gurdaspur district no exhibition was held in 1879, owing to a misconception. But the Deputy Commissioner reported in July of that year that purchasers were in the field, and that about Rs. 80 per maund were being paid for unpierced cocoons. A pleader of Amritsar was alone said to have purchased about Rs. 10,000 worth of cocoons in 1878, and to have sent men again in 1879 for the same purpose. One of Messrs Lister & Co.'s agents (Mr. Lepper) was also endeavouring to gain a footing in the district, and offered £600 for the late Mr. Halsey's silk filature at Sujampur and the lease of the Galpur rakh.

As to mulberry trees in this (Gurdaspur) district, the practice had been to divide the lines of road and canals where there were trees of the kind, to apportion them out to silkworm-rearers, and to let each man have that part of the road (or canal) which was nearest to his house or workshop, the length of the road (or canal) line granted being in proportion to his requirements. One Sheikh Jafir of Nainakot, the first silk-grower in the district, had the lease of the encamping ground at that place, and received at a fixed rate annually the lease of the Public Works Department road which runs through the Shakargarh tahsil. On the district roads and the canal the lessees were in some places allowed to break off small twigs bearing leaves, and in others, from roadside trees, merely the leaves. On the Bari Doab canal the length of line on which mulberry trees were grown was 5½ miles, and a portion of it from Madhopur to Sarna bridge, a distance of 7 miles, was sold to the manager of the Punjab Sugar Works Company,—it is not said for what purpose.

A proposal was under consideration (1879) for giving Mr. Lepper (of Messrs. Lister & Co.) the lease of mulberry trees in the district. Some of the local officers, including the Financial Commissioner, were of opinion that the firm should be allowed to have a reasonable quantity of Government mulberry trees for its requirements, but that it should not be allowed a complete monopoly to the injury of native rearers of silkworms. And ultimately an application from Mr. Lepper for the lease of leaves on the Gurdaspur and Amritsar road was sanctioned by the Punjab Government (Public Works Department).

The Local Government quite saw that "the formation and maintenance of China mulberry plantations are of importance in connection with the development of the silk industry;" and it caused the district officers to be instructed to encourage the formation of these plantations, and assist the industry as much as possible without direct interference. It also invited the attention of the Conservator of Forests to the matter, and expressed the opinion that "large plantations of the China mulberry might be formed by the officers of the Forest Department, which would be of great assistance to this industry and pay well."

The Government of India, in February 1880, approved the proceedings of the Punjab Government, and expressed a hope that "another year may show that the agents of the house of Lister & Co. have settled in the silk-producing districts of the Punjab, to the great advantage of the silk-growers there."

The year 1880 saw a fresh exhibition at Gurdaspur held on the 16th April. The proceedings were characterised by a deep interest taken therein by an increasing number of people, not the least among whom were the agents of Messrs. Lister & Co.

The number of competitors and the quantity of the produce exhibited were much less than in 1879. The Deputy Commissioner attributed this to the fact that both the country eggs collected by the people and the home eggs supplied to them were destroyed by change of climate or through some other accident. Of the Rs. 1,250 expended, the District Committee contributed Rs. 950, and Mr. Keighley on behalf of his firm gave the rest.

Immediately after this exhibition, the advisability was considered of having one joint show at Madhopur in Gurdaspur, instead of two separate ones (one in Gurdaspur and the other in Kangra) as in previous years; the Local Government having consented to the change, the exhibition of 1881 was held at Madhopur on the 2nd May. Due notice had been given throughout the tracts concerned, and lists of *bond fide* rearers were obtained from tahsildars and communicated to Messrs. Lister & Co.'s agent. The Gurdaspur District Fund contributed Rs. 1,000, the Kangra District Rs. 300, and Messrs. Lister & Co. Rs. 300, for prizes. Messrs. Lister & Co. also awarded four handsome silver medals, two for Kangra and two for Gurdaspur, to the exhibitors of the best cocoons by agriculturists and professionals, and these medals were highly appreciated by the recipients. A large number of persons from all parts of the districts assembled to witness the exhibition. The following committee awarded prizes: Mr. Moore, of the firm of Messrs. Lister & Co.; Mr. Chapman, Manager, Punjab Sugar Works; Lala Sanjhi Mul, Extra Assistant Commissioner; and the Deputy Commissioner as President. There were in all 447 exhibitors, of whom 124 were zemindars and 323 of mixed professions. There were few exhibits of country egg cocoons, the majority being from eggs imported from Japan, France, and Italy. The details of the show are condensed in the following table:—

Tahsil.	Cultivators.		Mixed professions.		No of Farmers given to		Amount of Prizes.		Weight of Seed used.		Weight of Cocoons produced.		Silk produced.		Number of men using silkworms of Government.	Remarks.
					Cultivators.	Mixed professions.	Cultivators.	Mixed professions.	Total.	Foreign.	Country.	Foreign.	Country.	Foreign.			Country.
	Cultivators.	Mixed professions.	Cultivators.	Mixed professions.	Total.	Foreign.	Country.	Foreign.	Country.	Foreign.	Country.					
Batala	60	62	7	13	75	125	200	0 0 12	0 0 3	43 8	43 3	0 15	0 1	46	Produced at Batala.	
Shakurpur								0 13 2	0 10 0			0 15	0 1		Produced at several villages.	
Pathankot	27	118	10	31	185	455	640	0 39 0	0 4 14	129 14	20 3	...	0 3	58	Produced at Sujapur.	
Gurdaspur	15	36	4	3	140	145	235	0 25 2	0 4 0	46 0	23 10 1	2 4	0 8	34	Produced at several villages.	
Total (Gurdaspur),	102	218	21	49	400	790	1,160	1 39 0	0 19 0	217 24 1	91 30 1	2 7 1	4 5	170		
Norpur (Kangra).	23	105	11	33	109	300	400	0 3 12	0 5 13	34 12 1	3 14 1	...	0 5	106		
GRAND TOTAL.	124	223	32	82	509	1,095	1,560	2 3 12	0 24 12	251 37	95 5	2 7 1	4 10	276		

The Deputy Commissioner of Gurdaspur, from whose report the above figures have been taken, wrote as follows:—

" . . . A number of persons brought in cocoons, whose names had not been entered as *bond fide* rearers; those to whom the tahsildars, who were present, could certify, were admitted to the competition, and the others excluded; the reason being that in former years a *bond fide* rearer made over a number of cocoons to other parties who had not reared them, on the understanding that the prizes, if obtained, should be divided, and it was to prevent this that lists were prepared.

"The cocoons raised from the climatised Japan and foreign eggs were very good, and declared by Mr. Moore, the only expert present, to be equal to any he had ever seen. The country cocoons exhibited were, however, not of a very superior description; they were of the same kind as shown last year. The quantity was certainly much smaller; this is owing to a disease having infected the country worms for the last three or four years, and consequently very little seed was left in the district. This year also in a few places the worms have died. From enquiries made by the agent of Messrs. Lister & Co., it appears that the disease was brought into the district by eggs imported by the late Mr. Halsey: these were hybridised

the country seed without any effort being made in this behalf. It is not likely that the moths and worms of the two classes are allowed to mix; but unless this is the case, the infection cannot spread."

The development of mulberry plantations was also considered satisfactory by the Lieutenant-Governor; and the Irrigation Department was requested to plant mulberry trees, as far as possible, on the banks of the Bari Doab Canal and its main distributaries in the Gurdaspur district.

Another exhibition was held in the Gurdaspur district on the 2nd May 1882; it was largely attended. Details regarding it are condensed in the following statement:—

DISTRICTS WHENCE EXHIBITORS CAME.	NO OF EXHIBITORS.		WEIGHT OF FRESH COCOONS PRODUCED.		AMOUNT OF PRIZES TAKEN	
	Cultivators	Mixed professions.	Cultivators	Mixed professions.	Cultivators	Mixed professions.
			Mds, Srs		Rs.	Rs
Gurdaspur	170	368	229	35	210	874
Kangra	30	143	39	23½	25	550
Siakot	1	1	0	25	...	...
Hoshiarpur	1	...	0	34	...	...
Amritsar	4	2	5	30	.	.
	206	514	85-28	210-39½	235	1,424
TOTAL	720		276-27½		1,659	

The prizes amounted to Rs. 1,700, of which the Gurdaspur district contributed Rs. 1,000, Kangra Rs. 400, and Messrs. Lister & Co. Rs. 300. Messrs. Lister & Co. also presented three handsome silver medals. The samples of cocoons were, on the whole, inferior, because of the disease among the silk-worms originating with the indigenous country eggs and spreading to the foreign, owing to the natives not having been careful enough to prevent the two kinds of seeds from getting mixed. The proportion of foreign to that of country cocoons produced was 1 maund of the former to 1 maund 8½ seers of the latter. The quality of the country cocoons was not nearly so good as the product from foreign eggs. The sickness was among the indigenous worms much greater than among those from foreign eggs. The disease affected both the quantity and quality of the outturn of cocoons, and Messrs. Lister & Co. apparently were unable to obtain enough silk to keep their filature in constant work, and they had to seek supplies in Bengal. The Commissioner of the Division feared that, unless some attempt were made to stamp out the disease, there would be danger of this new Punjab industry suffering irreparable injury, and he suggested the plan of destroying all the eggs belonging to any rearer whose worms might appear to be diseased, and substituting good eggs in exchange for doubtful ones. The Financial Commissioner agreed that there was serious risk of the extinction of a very promising industry, and thought that the Divisional Commissioner should submit, after consultation with the agents of Messrs. Lister & Co., a special report as to the measures he deemed necessary, and as to the cost which the destruction of the diseased and the supply of healthy seed would involve. The Provincial Government, in acknowledging the papers, said it would await the receipt of the special report which the Financial Commissioner proposed to call for. This was in August 1882, and up to now no report has reached the Government of India.

In other parts of the Punjab, little or no silk is produced; the raw material continues to be obtained from Central Asia, Kashmir, Bengal, and China, and

storey of the house, occupied by the lower orders in the valley, was generally the principal breeding-room. Millions of mulberry trees of the indigenous varieties afforded ample food; but the ownership of the trees rested with the Maharaja, and the rearers of worms had to pay for the leaves.

The industry was thus carried on from year to year without any systematic attempt at development, and with no attempt at all at improvement until 1869, when the superintendence of the operations in Kashmir proper (as distinguished from the Jammu Division, of which more further on) was entrusted to the Chief Justice of Kashmir, a Bengali gentleman, by name Babu Nilambor Mukerji.

This functionary encountered many difficulties at first, and all he was able to effect from 1869 to 1871 was some improvement in the quality of reeled silk, which he did by organising a body of reelers and teaching them a better process of reeling than that which had been in practice. The improvement was apparent in some samples which were forwarded in 1872 through the Government of India to Her Majesty's Secretary of State. The samples consisted of (1) silk reeled from white cocoons by water power; (2) silk reeled from yellow cocoons by water power; (3) silk reeled after the old fashion. Messrs. Durant & Co., silk-brokers in England, reported on the samples thus:—

"There is much in samples (1) and (2) very encouraging; the nature of the silk is good, showing that the cocoons have a thread which has strength and nerve, and capable of being made into excellent silk. We find the quality of the thread, as also the thread itself, superior to much of the native-reeled silk of Bengal. . . . We would put the value of such silk as that shown by samples (1) and (2) at 23s. and 24s. per lb; as for (3) it can scarcely be classed as "raw silk," but as waste silk it might fetch about 3s. per lb."

Even, however, as regards samples (1) and (2), much was apparently required to make them take the place that they might hold in the silk market; and Messrs. Durant & Co. suggested that, rather than go on experimenting, models of the best French or Italian reels should be procured, together with two or three intelligent Europeans, who would be able to teach the natives of Kashmir how to use the advantages which they evidently possessed in their raw material.

The report was communicated through the Punjab Government to the Maharaja of Kashmir in December 1872; but it does not appear that advantage was taken of the suggestion to procure European reelers or reels. The plan was continued of training Kashmiris under the superintendence of experienced reelers from Bengal, furnished with improved apparatus.

The rearing of silkworms also soon engaged the attention of the Babu; and in 1872 he undertook to work improvement in the system in practice among the natives. He recounted his efforts thus, in a note dated the 19th August 1876:—

"From that time (i.e., 1872) to this day I have been trying to teach the people an improved system of rearing the silkworms; and the unwearied exertions of Dewan Kirpa Ram, the Prime Minister, and Wazir Punnoo, the Governor of Kashmir, under the watchful eyes of His Highness the Maharaja, have enabled me to increase the quantity and improve the quality of the annual outturn of cocoons and silk.

Highness's
ill), and I

"The most important peculiarities of the system of rearing now followed in Kashmir are the following:—

- (1) One hundred and twenty-seven Government magnaneries have been built on an improved plan for the use of the rearers, who pay rent for the same, and a number of skilled rearers teach the people gratis the importance of space, temperature, light, ventilation, and cleanliness.
- (2) Eggs in small quantities are being distributed to the zamindars, who rear the worms in their own houses and engage their children and women in tending

Supply Association; and to Mr. E. Milson, a practical reeler of silk at Lyons. These three gentlemen reported as follows.

As regards the cocoons, Mr. Milson said:—

"They are very dry and are hard under the brush, requiring long boiling. They are rather poor in silk and rich in natural gum; but as the chrysalis is very dry, the yield is comparatively good, and can be estimated at about $4\frac{1}{2}$ kilos. of cocoons for 1 kilo. of silk. These cocoons would, therefore, find a ready sale in France, and for shipment to this country they can be press-packed without fear of injury if they are as dry as the sample sent."

Mr. Cobb said:—

"The cocoons are of the Italian races, and, if acclimatised in India, would revolutionise the silk production of that country. Either the heat, or an improper supply of food, or insufficient food, has prevented these cocoons being as heavy as they promised to be, and, if the worm had been stronger, they would have produced heavier cocoons."

Regarding the value of the cocoons, Mr. Milson wrote:—

"The value of these cocoons, if perfected, can be estimated at about 15 to 16 francs per kilo. at the usual Marseilles terms,—*cis.*, taking the yield at the normal figure of $\frac{1}{2}$ kilo. of cocoons to 1 of silk. These cocoons yielding $4\frac{1}{2}$ kilos. would be worth about 13 to 14 francs per kilo. as they are."

Regarding the silk, Mr. Leckie said:—

"The silk is a most creditable production, superior in quality to the silk of Bengal, and it ought, if reeled with more skill, to take rank with the better description of Italian silk. As compared with Italian, it is worth about 2s. per lb. In point of cleanness of thread, it is quite up to the standard of good Italian, but the thread itself is too flat.

"This could, however, easily be remedied by more turns or twists being put on the two threads as they go from the basin to the reel, and the angle at which they are separated being more obtuse. The samples show another fault, but one which fortunately can be easily remedied; it is the mode in which the thread is laid upon the reel."

Mr. Milson said:—

"The silk produced by these cocoons is good and strong, but it is slightly "knobby;" and as the cocoons contain a large quantity of natural gum, it may be expected that the silk will lose more than European silk at the boiling off. A friend in the Cevennes estimates the probable loss at from 22 to 25 per cent. against a loss of 20 to 22 per cent. on European silk. The price of the silk, according to samples, would be from 70 to 77 francs per kilo."

Mr. Cobb said:—

"The silk ranks above the best surdabs, and, in fact, takes place among second Italians."

Mr. Milson had some of the cocoons reeled in the Cevennes, and some reeled in the Vanduse, and estimated the cost of reeling at 12 to 13 francs per kilo.

These reports were communicated by the Government of India in August 1878, through the Punjab Government, to the authorities in Kashmir; and the favourable results no doubt prompted congratulations at the Durbar seat. But what might otherwise have proved an unmixed satisfaction seems to have been marred by the ravages which some disease had already begun to commit among the Maharaja's silkworms; and the Kashmir Durbar, in acknowledging the reports, informed the Government of India in November 1878 that "a bad epidemic" had very nearly destroyed the worms within the valley, and that renewed exertions would have to be made to give a fresh start to the industry.

A supply of eggs was still in stock amounting to about a couple of maunds; but the supply required was apparently 10 maunds (!), and a request was therefore made to the Government of India for "a large quantity of eggs" from Japan. The Government in reply expressed willingness to procure the eggs,

* Pay about 2s. 2d. to 2s. per lb.—L. L.

* That is, about 25s. per lb.

of districts in which the operations were carried out, the quantity of egg supplied, and the quantity of cocoons produced:—

Number of districts.	Years	QUANTITY OF		REMARKS.
		Eggs supplied.	Cocoons produced	
		Seers	Mds. *	
7	1873	61 $\frac{7}{8}$	42 $\frac{1}{2}$	The eggs were the produce of Kashmir and Nainital.
10	1874	78	232 $\frac{1}{2}$	"
10	1875	128	258	"
10	1876	135	308 $\frac{1}{2}$	"

In the first of these three years, the produce of cocoons, which, according to the European standard, ¹ should have been about 200 maunds in weight, was only 42 $\frac{1}{2}$ maunds. The cause of the failure was attributed by the Babu to the hatching of the eggs having commenced too late in some places, and in others to the ignorance of the rearers. In the next year (1874) the large supply of eggs rendered insufficient the rearing-places and the appliances available; some timely arrangements were made for constructing houses and supplying the necessary appliances; but when the hatching time came, it was found that only half the quantity of eggs could be accommodated, and some additional temporary accommodation was obtained from cultivators. In several places the eggs began to hatch too late, the worms became subject to the excessive heat of April, and from these causes and the insufficiency of accommodation, the cocoons produced was only 232 $\frac{1}{2}$ maunds, whereas it should have been over 2,000 maunds according to the European standard. Some change in the establishment took place this year: at the beginning of the season 10 additional Kashmiri rearers were procured, 20 reeling instruments of the Bengal pattern were introduced, two good reelers were engaged, under whom were placed 40 out of the 90 lads above referred to, and of the remainder 30 lads were discharged.

In 1875 the increase of rearing-places was not proportionate with the increase in the supply of eggs, the heat became excessive, and nine-tenths of the worms died: the remainder gave the outturn of 258 maunds of cocoons. In 1876 the number of rearing-houses was increased in a few of the ten districts; but still the produce of cocoons was not satisfactory; and the want of success was attributed to continual rain for two days with high wind, to ignorance of a boy in charge, to excessive heat, lateness of the hatching, &c. It seems at last to have struck the Babu that early hatching (so as to avoid the heat) and suitable airy rearing-houses were essentially necessary. The latter requisite was met in 1876 by an order of the Maharaja to build "comfortable houses for rearing," and for the former, measures were taken to increase the plantation of the Chinese mulberry, which "generally opens its leaves 15 days earlier than the country ones."

A few skeins of silk were sent to Calcutta by the Babu in 1876, and were valued at Rs. 18 and Rs. 15 per seer for the first and second qualities, respectively.

The following explanation of the system of rearing was given by the Babu in a note dated April 1876:—

"The eggs introduced here are of Kashmir stock (*Bombyx mori*), and are of loose condition, not like those of *Bara poloo* of Bengal, or annual eggs of China or Japan, as attached to some cloths or cards. The eggs are kept here in new earthen vessels, so that $\frac{1}{4}$ or $\frac{1}{2}$ of the inward space of the vessel may be occupied, and care is taken to keep the vessels free from damp or heat.

"When the season approaches and tender leaves of mulberry come to sight, the eggs are cleansed and again kept in the vessels as stated above. To apply heat to the eggs, the vessel or

* 1 oz. of eggs to 1 md. of fresh cocoons.

in the art. Besides these boys in permanent employ, there were also daily labourers, of whom 13 proved able to reel fine good silk. This establishment was paid at 2 or $1\frac{1}{2}$ annas a day.

The reelers were paid at different rates according to fitness; some received Rs. 6-4 and some Rs. 4-6 per mensem. There were besides 3 Kashmiri reelers, who supervised the work and were paid Rs. 10 a month. A good reeler reeled about 3 chittacks of fine good silk a day. There were three kinds of cocoons in operation; the best yielded at the rate of 1 seer of silk to 5 seers of cocoons, or $\frac{1}{5}$; the second gave $\frac{1}{6}$, and the third $\frac{1}{7}$, the silk being coarse besides. Heat used to be applied by fuel, not by steam, for boiling the cocoons. But more recently steam boilers were introduced, and a good filature established.

Having summarised the proceedings of the Kashmir and Jammu authorities in the matter of sericulture so far as known to us, we might close this section by presenting two statements showing the total quantities and values of cocoons, raw and floss silk, and chassum produced and sold. The figures have been compiled from returns kindly furnished by the local authorities, and give a fair indication of the state of the industry up to the end of 1881.

"Previous experiments have been conducted at Dhulia. Mulberries were planted on the model farm at Bhadgam, and were successfully grown, but worms were never reared there, the intention to do so having failed to be carried out owing to a disease breaking out amongst them in Mysore, whence eggs were to be procured. But His Excellency in Council has ascertained that the place best suited for experiments in sericulture is the neighbourhood of Kunhar above the ghâts, where mulberries have been successfully grown by the late Major Atkins. At Dhulia, it would be easier to ensure proper superintendence, but the climate of Kunhar is more favourable for the rearing of silkworms than any in Khandesh below the Satmulla mountains, and this outweighs every advantage which Dhulia possesses.

"The village of Kunhar itself is in the Nizam's territory, but at Makranpur, which is in British territory, there is land equally well adapted for the growth of mulberries, and the climate is the same. A field of about 9 acres with a good water-supply, and in other respects well suited for the purpose, is now available, and can be purchased for Rs. 250. His Excellency the Governor in Council, being of opinion that it is not advisable to lose the present season, has authorised the Collector to secure possession of this land at his discretion, and to commence planting it with mulberry trees.

"As the experiment can only be carried on with any hope of success by persons who have been trained to this industry, the Chief Commissioner, Mysore, was requested to ascertain whether there was any probability of families skilled in such work being induced to migrate to Khandesh on the terms proposed by the Collector, *viz.*, that they should get Rs. 12 per mensem. In reply a letter from the Deputy Commissioner, Bangalore district, has been forwarded, from which it appears that there will be no difficulty in procuring men competent for carrying on the experiments."

Under these circumstances the Bombay Government asked, and the Government of India sanctioned in September 1874, a money assignment at the rate of Rs. 1,000 per annum for five years, and the experiment was started at once.

In June 1876 a report came to the effect that, owing to there being no skilled superintendence for the proper rearing of the worms, no satisfactory results had, till then, been obtained in the Khandesh model farm. It would appear from this that the trial was not made at Kunhar as at first designed, and that skilled labour was not available from Mysore as had been hoped for. To obviate the disadvantage arising from the absence of such labour, the Bengal Government was asked to procure "a man who understands both the care of the worms and the process of winding off the silk, or, if this is impossible, two men, one for each operation." Some months elapsed before this request was complied with, and it was only in April 1877, that two natives with the required experience were sent from Bengal to the Khandesh farm; the pay allowed was Rs. 30 per mensem each, and the engagement was for one year. Nothing further appears in regard to this experiment either.

The dyeing industry is foreign to this Memorandum, but the following facts relating to silk-dyeing in Shikarpur, (Sindh) is worthy of note. The industry, which had once been an important one, fell off from various causes till it became altogether insignificant. In 1882 the local dealers and dyers, wishing to revive the trade, unitedly signed a covenant to use only fast dyes, and asked the Collector of the district to witness it, and to let the matter be known. The Collector complied with their request and sent sets of samples (each set consisting of 16 colours) for deposit and general inspection to the Karachi Museum, to the Government of Bombay, to the Government of India, and to the Secretary of State. The Government of India published the above facts in the different provinces. The Secretary of State transmitted the samples to the Science and Art Department "for exhibition in such place and manner as may be considered most likely to attract the attention of practical men."

From further information, it seems that the silk in question is not the produce of Shikarpur itself, but that it comes thither from Herat and the countries beyond. It is apparently the produce of the same worm as that of Europe. The Herat merchants are not ready to impart any information regarding their

MADRAS PRESIDENCY.

Regarding the Madras Presidency, the account given by Mr. Geoghegan has exhausted the subject, and on a reference the Government of that Presidency reported in 1873 that no further information was available.

The Collector of Coimbatore alone made further remarks. He stated that an experiment of entrusting silk culture to two Inspectors of Police was a failure; that an offer of waste land, rent free, to grow the mulberry met with no response; that the reeling stage is that at which the failure occurs; that silk-makers will not pay a large price for a proper reeling machine when their own simple wheel does all they want; and that they have no difficulty in selling in local markets all the silk they produce, there being no external demands.

BRITISH BURMA.

We learn from Mr. Geoghegan's account that sericulture was, at the time he wrote (1871-72), carried on in the districts of Prome, Thayetmyo, Henzada, Toungoo, and the northern portion of Rangoon, by a class of people who lived in villages by themselves and held but little social intercourse with their neighbours, and that the occupation was a lucrative one. The silk produced was, however, of an inferior description, arising from the "rile" methods in practice in the rearing of the worms and the reeling of the silk.

It is very probable that there has been no change in the above condition, for we learn that silk still forms one of the most important industries of the Prome district, and that it is also made and woven in the Rangoon and Shwepyithar districts, in Thayetmyo, Henzada, and Toungoo. The system, too, has not altered apparently, judging from the following account given in the "Imperial Gazetteer of India" (1881):—

"The method pursued in this industry is rude and careless in the extreme, all the processes being carried on in the ordinary bamboo dwelling-houses of the country, which are smoke-begrimed and dirty. The plant of a Burmese silk flature is inexpensive, consisting simply of (1) a set of flat trays with slightly raised edges, made of bamboo strips from 2 to 4 feet in diameter, (2) a few neatly made circles of palm-leaves, 3 or 4 inches in diameter, (3) some strips of coarse cotton cloth, (4) a common-looking pot, (5) a bamboo reel, and (6) a two-pronged fork. Silk-weaving is carried on principally in the towns of Prome and Shwepyithar; the best cloths are made from imported Chinese silk, which costs £3-12 per viss, or 3-65 lbs., whilst the same quantity of the home-grown article costs only £2-4."

From samples of raw silk of the Prome district received by the Government of India in the early part of 1882, there was certainly no improvement apparent. The samples were transmitted to the Secretary of State, and were reported upon by Messrs. Durant & Co., silk brokers of London, thus:—

"We are not able to give you a very encouraging report on the samples. (1) the thread is very imperfect, being uneven, gouty, and knobby, (2) the length of reel (i.e., the circumference of the skein) is too large for any machinery now in use in this country; and if such did exist, it is doubtful if any employment could be found for silk so defective in all respects. There being no market here for such silk, it is difficult to give anything like an accurate quotation of the value; but if a market could be found in Marseilles, where there is an outlet for 'dappioni' of Italy and France, with which it might compete (at a distance), the value would be about seven shillings per lb.

"So far as we can judge, we are inclined to think favourably of the nature and quality of the cocoon; and if technical skill was brought to bear so that the temperature of the water, the laying of the thread on the reel, and some minor points in the manipulation of the cocoons could be accurately determined, the silk produced from such cocoons as the samples indicate would, we think, compete successfully with that of Bengal, as also with that produced in some of the north-west provinces of China."

The accuracy or otherwise of this opinion could, however, be determined only by testing the cocoons; and Messrs. Durant & Co. accordingly asked for

CHAPTER V.

REVIEW OF THE TRADE STATISTICS AND PRICES

THE following statement shows the exports by sea of Indian silk and silk manufactures during the last thirteen years. The Returns of the Trade of British India do not make any distinction between silk produced by the mulberry-fed worm and that of other worms, such as the tasar. The figures therefore include both kinds of silk :—

Official years.	Meaning of the figures	Raw Silk	Chussam or Waste Silk.	Cocoons	Thread for sewing	Piece-goods	Goods of Silk mixed with other materials	Other sorts	Total Value in Rupees
1	2	3	4	5	6	7	8	9	10
1870-71	Quantity	2,131,593	---	---	---	---	---	---	1,40,88,450
1871-72	Value	1,25,85,274	---	---	---	15,03,176	---	---	1,40,88,450
1872-73	Quantity	1,883,922	---	---	---	68,900	---	---	1,23,37,892
1873-74	Value	1,08,10,971	---	---	---	25,29,621	---	---	1,23,37,892
1874-75	Quantity	2,231,878	---	---	---	1,033,819	---	---	1,44,23,600
1875-76	Value	1,23,63,681	---	---	---	18,60,246	---	---	1,44,23,600
1876-77	Quantity	2,233,827	---	---	---	1,615,022	---	---	1,36,64,956
1877-78	Value	1,14,37,412	---	---	---	22,27,544	---	---	1,36,64,956
1878-79	Quantity	1,656,916	---	---	---	1,49,203	---	---	93,54,603
1879-80	Value	76,64,618	---	---	---	23,19,856	---	---	93,54,603
1880-81	Quantity	1,310,869	---	---	---	65	38,153	3,760	65,87,276
1881-82	Value	41,69,414	---	---	---	53	24,80,394	15,327	65,87,276
1882-83	Quantity	1,417,803	---	---	---	11	2,316,125	15,120	84
1883-84	Value	77,40,938	---	---	---	105	22,26,345	9,346	1,00,05,640
1884-85	Quantity	1,612,819	---	---	---	1,491,248	84,402	4,404	85,44,292
1885-86	Value	70,35,403	---	---	---	14,71,607	36,271	2,801	85,44,292
1886-87	Quantity	1,323,509	---	---	---	230	1,740,003	97,182	74,60,872
1887-88	Value	47,72,291	---	---	---	923	16,80,068	71,053	74,60,872
1888-89	Quantity	663,210	784,481*	40,818*	---	163	2,203,871	130,133	82,07,186
1889-90	Value	46,55,085	5,50,476	48,039	---	1,519	21,78,637	1,04,738	82,07,186
1890-91	Quantity	680,665	735,464	18,447	---	1,670	2,157,576	216,391	114
1891-92	Value	48,40,317	6,28,732	14,942	---	8,144	22,54,060	2,15,028	77,10,165
1892-93	Quantity	340,160	747,693	28,503	---	371	2,196,438	154,630	440
1893-94	Value	32,17,575	8,31,213	31,143	---	1,397	20,57,722	1,55,242	1,765
1894-95	Quantity	501,570	814,415	23,152	---	167	2,508,217	202,447	88
1895-96	Value	44,10,415	10,04,361	26,556	---	667	25,10,997	2,43,590	1,100

NOTE.—The quantities in columns 3, 4, 5, 6, and 9 are lbs., those in columns 7 and 8 are yards, the values are ex. rupees.

* Chussam and cocoons were not separately distinguished before 1879-80, but were included under the term "Raw Silk."

The total values show the extent of the decline which is known to have occurred in the exports of Indian silk. Omitting the variations which indicate partial increases in exceptional years, a downward course is very apparent; and the exports, which in 1870-71 amounted in value to Rs. 1,40,88,450, fell through rapid successions until they stood at Rs. 60,98,797 in 1881-82. Since then a small increase has taken place, the exports having amounted to Rs. 82,07,186 in 1882-83. The question is whether the probability for the future lies in the direction of a continuation of the rise or of fresh falls as in previous years. An endeavour will be made to answer this question in Part III of this Memorandum.

For the present, if we look into the details of the figures given in the above statement, we find that it is the export trade in raw silk which has been falling so considerably, viz., from Rs. 1,25,85,274 in 1870-71 to Rs. 77,69,036 in 1876-77, and to Rs. 44,10,415 in 1882-83; but the fact must not be overlooked that the figures of 1870-71 and 1876-77 include chussam and cocoons, while those of 1882-83 are exclusive of them; the falling therefore, though an ascertained fact, is in the last mentioned year really somewhat less than a comparison of the figures indicates. Concurrently with the decline in the raw silk trade, a considerable increase is apparent in the exports of waste silk and piece goods, thus:—

Official years	Waste Silk.	Piece goods	Goods of Silk mixed with other materials.	Total Value
1870-71	Figures not available	15,03,176	Figures not available.	15,03,176
1872-73		18,60,249		18,60,249
1876-77		22,26,985		22,26,985
1879-80		5,30,476		5,30,476
1881-82		8,34,213		8,34,213
1882-83	10,04,361	25,10,997	2,43,590	37,68,948

and Bombay, and therefore include the silks which enter the coasting trade which will be reviewed further on.

From	IMPORTS INTO							
	CALCUTTA.				BOMBAY.			
	Raw.		Manufactured.		Raw.		Manufactured.	
	lbs.	R	lbs.	R	lbs.	R	lbs.	R
Punjab	3,690		12,218					
Bombay (Presidency)	492		4,264		65,026	2,61,010	198,604	9,68,800
N.-W. P. and Oudh	246		3,290				574	2,800
Central Provinces	...				574	2,304	17,958	87,600
Rajputana	...				...		...	...
Bengal	620,412		357,942		83	329	...	...
Behar	...		...		...		...	...
	624,840	38,10,000	407,704	37,29,000	65,682	2,63,643	217,136	10,59,200

The countries to which the exports by sea proceed are, in their order of importance of the trade, France, Italy, the United Kingdom, Arabia, the Straits Settlements, Aden, Mauritius, Turkey in Asia, Persia, Zanzibar and Mozambique, the United States, Ceylon, and Egypt; and of less importance are Réunion, Malta, Natal, Mekran and Sonmiani, Hong-Kong, and other countries.

The exports to France exceed those to any other country; and Italy is not far behind as a recipient of Indian silks:—

Years.	FRANCE.					ITALY.			
	Raw Silk.	Waste Silk.	Cocoons.	Piece-goods.	Total.	Raw Silk.	Piece-goods.	Waste Silk.	Total.
	R	R	R	R	R	R	R	R	R
1870-71	19,87,570	...	...	33,500	20,21,070			...	
1875-76	19,04,377	...	...	3,75,214	22,79,591	10,67,894	...	17,381	10,85,276
1880-81	22,71,556	2,98,801	6,219	8,10,476	33,87,052	20,83,407	350	1,708	20,85,465
1881-82	7,94,970	7,07,536	9,309	9,32,295	24,49,110	18,95,842	4,242	24,483	18,64,867
1882-83	14,61,268	8,73,395	...	6,38,111	29,62,774	26,00,251	6,390	6,000	26,12,451

Next in importance come the exports to the United Kingdom:—

Years.	Raw Silk.	Chusum or waste Silk.	Cocoons.	Thread for sewing.	Piece-goods.	Goods of silk mixed with other materials.	Other sorts.	Total.
	R	R	R	R	R	R	R	R
1870-71	99,50,056	...	...	...	8,33,624	...	...	1,07,83,680
1875-76	11,01,582	...	...	...	12,49,226	7,390	...	23,58,193
1880-81	4,43,300	3,25,801	8,472	...	7,96,767	3,554	900	15,78,794
1881-82	3,19,457	1,22,435	21,834	...	6,90,957	...	1,720	11,56,433
1882-83	3,03,204	1,24,766	26,656	10	15,11,311	...	1,200	19,67,147

Arabia and the Straits Settlements stand fourth and fifth as recipients of Indian silks:—

Years.	ARABIA.				STRAITS SETTLEMENTS.			
	Raw Silk.	Piece goods.	Goods of Silk mixed with other materials.	Total.	Piece-goods.	Goods of Silk mixed with other materials.	Other sorts.	Total.
	R	R	R	R	R	R	R	R
1870-71	...	...	...	...	88,884	...	...	88,884
1875-76	6,974	1,29,219	9,219	1,44,413	1,60,103	...	451	1,60,554
1880-81	5,236	1,16,274	77,631	1,93,041	62,689	29,351	...	92,040
1881-82	10,348	1,29,084	50,564	1,89,996	46,990	22,372	...	69,972
1882-83	3,282	87,964	73,742	1,64,988	51,746	29,547	...	81,293

In piece-goods the trade has on the whole increased as already noted, and the increase has taken place in the exports to the following countries; the other countries show a decrease, which, however, does not in any way equal this increase:—

	1870-71	1875-76.	1882-83.
	R	R	R
United Kingdom	8,33,624	12,49,226	15,11,311
France	33,500	3,75,214	6,38,111
Mauritius	16,666	52,162	73,851
	8,83,790	16,76,602	22,23,273

It must, however, be noted that a large proportion of this increase consists of corahs simply sent to England to be printed and brought back for use in this country.

The increase in the trade in goods of silk mixed with other materials has taken place chiefly to the following countries:—

	1875-76.	1881-82.	1882-83.
	R	R	R
Arabia	9,219	50,564	73,742
Straits Settlements . . . . .	...	22,372	29,547
Aden . . . . .	...	15,020	40,352
Persia	1,858	13,447	16,542
	11,077	1,01,403	1,60,183

Besides the export trade with other countries by sea just noticed, a trade also proceeds coastwise from the ports of one Maritime Province to those of another. The two following statements give figures of this coasting trade:—

Exports of Indian Silks coastwise.

Official year	Exported from	NATURE OF SILK.				TOTAL
		Raw Silk.	Piece goods.	Goods of Silk mixed with other materials	Other sorts	
		R	R	R	R	R
1870-71	Bengal	(No distinction made in the returns).				16,56,994
	Madras					8,259
	Bombay					51,182
	Sindh					2,87,520
	British Burma					7,072
	TOTAL	...	...	...	...	20,51,027
1875-76	Bengal	13,97,841	2,48,063	...	328	16,46,237
	Madras	61	19,345	...	...	19,406
	Bombay	1,700	17,606	...	4,143	23,449
	Sindh	1,900	2,516	...	330	4,746
	British Burma	585	3,839	...	...	4,424
	TOTAL	14,02,067	2,91,374	..	4,801	16,98,232

It will be seen that of the five maritime provinces, Bengal carries on the most extensive coasting trade in Indian silks (Rs. 17,64,136), and that Bombay comes next (Rs. 4,16,655). The exports from Bengal coastwise, which consist chiefly of raw silk (Rs. 12,82,642) and piece-goods (Rs. 3,80,380), proceed in the case of raw silk almost entirely to Madras (Rs. 12,63,550), with a small quantity to Bombay (Rs. 15,844) and British Burma (Rs. 3,248), and in the case of piece-goods almost entirely to British Burma (Rs. 2,70,440) and Madras (Rs. 1,03,844). The exports from Bombay, which consist chiefly of piece-goods (Rs. 3,83,106), proceed chiefly to British Burma (Rs. 2,71,819) and Sindh (Rs. 99,240), with a small quantity to Bengal (Rs. 10,000) and Madras (Rs. 2,047). The exports from Madras, which consist chiefly of piece-goods and mixed goods (Rs. 47,419 and Rs. 20,466), proceed chiefly to British Burma, with a small quantity to Bombay (Rs. 3,816). The exports from Burma, consisting at the present date chiefly of raw silk (Rs. 9,376), proceed to Bengal. Those from Sindh, consisting of raw silk (Rs. 75) and piece goods (Rs. 980), proceed to Bombay.

The exports thus distributed are received in the respective provinces as shown in the second of the two last statements. Madras is the largest recipient (Rs. 14,12,217), chiefly of raw silk (Rs. 12,63,550) and piece-goods (Rs. 1,06,051); British Burma the second largest (Rs. 6,71,959), chiefly of piece-goods (Rs. 5,85,862); Sindh the third (Rs. 1,26,318), chiefly of piece goods; and Bombay and Bengal coming the fourth and the last, with totals of Rs. 30,044 and Rs. 25,837. In regard to Bombay, it is a noticeable fact that thirteen years ago the total imports coastwise amounted in value to Rs. 10,85,711, supplied chiefly by Bengal. Bengal is still the chief supplier of Bombay, but the total supplies have fallen down to Rs. 30,044, owing to the inability of Bengal to compete with China in the Bombay market, as will be seen presently from the largely increasing quantities of China silks which are imported into Bombay.

Before proceeding to the import trade in foreign silks, we may note here the coasting trade between the different ports *within* each province. The following figures, which are those of 1881-82, show the extent of this interportal trade :—

	Bengal	Bombay	Sindh	Madras	British Burma	Total
	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>
Raw Silk	17,152	6,890	268	10,086	24,386	34,386
Piece-goods	562	8,396	1,086	16,931	41,488	68,463
Goods of Silk mixed with other materials	..	498	..	..	3,144	3,642
Other sorts	..	..	..	177	445	622
TOTAL	17,714	15,774*	1,354*	17,108	55,163	107,113

* Besides this there is a small trade between Kattywar and Bombay, and between Cutch and Sindh, valued in the former case at Rs. 660, and in the latter at Rs. 468.

Imports of Foreign Silks into India.

Foreign silk, whether raw or manufactured, was, on the import, subject to a duty of $7\frac{1}{2}$ per cent. up to the 5th August 1875; thereafter the duty was reduced to 5 per cent.; and it was abolished from the 10th March 1882.

These measures, which might *prima facie* have been expected to lower the value of the imports and to raise the quantity, have not apparently had such

mixed with other materials has increased from nearly 200,000 yards in 1870-71 to over one million in 1882-83, valued at 8½ lakhs of rupees. (This is significant in showing that as in Europe so in India demands for cheap or mixed silk goods are increasing, because classes of people wear silk now who never wore silk in former days, and cheap stuffs are made for their particular use, and also because of the greater cost of good silk.) Thread for sewing is not an important item, although the import of that too has risen from nothing in 1870-71 to a value of Rs. 29,000. The import trade as a whole rose from a value of Rs. 1,32,10,901 in 1870-71 to Rs. 2,41,74,021 in 1880-81, then fell to Rs. 1,96,09,163 in 1881-82,¹ and rose again in 1882-83 to Rs. 2,07,18,379.

The countries whence these imports come are China, the United Kingdom, the Straits Settlements, France, Persia, Italy, Egypt, Ceylon, Arabia, Japan, Austria, and Turkey in Asia. Russia used also to be a supplier to the extent of Rs. 2,87,050 in 1880-81, and Rs. 1,40,020 in 1881-82, chiefly raw silk; but the silk which was really the produce of Persia began in 1881-82 to be sent to Amritsar *via* Kabul instead of *via* Odessa and Bombay; and the Kabul route evidently monopolised the whole trade in the following year (1882-83), for we find no import at all from Russia.

The imports from China exceed those from any other country. The following table shows the imports of the last three years, as compared with those of 1875-76 and 1870-71:—

Years.	Raw Silk.	Thread for sewing.	Piece-goods.	Goods of Silk mixed with other materials.	Other sorts.	Total.
	R	R	R	R	R	R
1870-71 . . .	78,88,611	...	16,89,588	31,060	66	96,09,325
1875-76 . . .	55,34,821	9,380	25,54,270	2,753	1,393	81,02,591
1880-81 . . .	70,49,585	1,923	32,80,216	7,817	...	1,12,39,595
1881-82 . . .	51,56,879	7,952	22,38,489	4,533	...	74,05,653
1882-83 . . .	81,57,304	12,618	34,12,992	5,068	...	1,18,87,972

The imports from the United Kingdom are next in importance:—

Years.	Raw Silk.	Thread for sewing.	Piece goods.	Goods of Silk mixed with other materials.	Other sorts.	Total.
	R	R	R	R	R	R
1870-71 . . .	...	...	14,33,834	25,204	15,347	14,74,385
1875-76 . . .	69,322	1,667	28,59,578	2,29,909	1,620	29,62,098
1880-81 . . .	8,790	4,013	41,92,476	12,64,848	6,921	54,78,048
1881-82 . . .	30,153	5,728	45,65,557	8,27,129	6,456	54,35,023
1882-83 . . .	32,098	8,100	39,04,553	5,57,711	5,723	45,08,185

Then come those from the Straits Settlements:—

Years.	Raw Silk.	Thread for sewing.	Piece-goods.	Goods of Silk mixed with other materials.	Other sorts.	Total.
	R	R	R	R	R	R
1870-71 . . .	7,98,308	...	24,082	1,111	1,643	8,25,144
1875-76 . . .	10,33,192	2,544	4,19,829	5,861	...	14,61,426
1880-81 . . .	19,86,846	4,191	10,75,653	6,836	...	30,73,526
1881-82 . . .	18,21,392	2,685	9,67,994	8,399	20	28,00,490
1882-83 . . .	16,59,192	7,674	8,42,450	3,633	...	25,12,949

¹ Owing, Mr. O'Connor says, to a rise in the prices in the China markets—Review of the Maritime Trade of British India for 1881-82.

Official year.	Nature of Silk.	IMPORTED INTO				
		Bengal.	Bombay	Sindh.	Madras.	British Burma.
		R	R	R	R	R
1875-76	Raw Silk	1,86,694	59,74,069	3,238	7,393	7,77,466
	Thread for sewing	1,427	9,722	60	671	2,520
	Piece-goods	12,53,502	30,32,122	3,348	82,172	21,08,043
	Goods of silk mixed with other materials.	41,347	35,353	27	1,191	1,14,133
	Other sorts	3,013	...	...	9	...
	TOTAL	14,85,953	91,51,265	6,693	91,411	33,02,164
1881-82	Raw Silk	1,12,226	57,80,509	4,750	131	15,94,471
	Thread for sewing	3,614	10,030	...	231	2,529
	Piece-goods	17,09,197	46,99,747	19,511	54,901	45,77,121
	Goods of silk mixed with other materials.	1,91,968	3,12,485	2,540	1,196	5,23,636
	Other sorts	176	7,231	200	12	428
	TOTAL	20,17,181	1,08,10,002	27,001	56,791	66,98,185
1882-83	Raw Silk	1,44,737	91,81,406	12,305	309	14,01,949
	Thread for sewing	3,521	17,918	...	64	7,714
	Piece-goods	7,28,995	38,20,349	44,461	58,499	42,49,933
	Goods of silk mixed with other materials.	2,37,898	3,97,113	25,035	358	1,78,076
	Others sorts	378	5,543	638	4	1,175
	TOTAL	11,15,529	1,34,22,329	82,442	59,234	59,38,847

Bombay receives the largest share of the import trade (134 lakhs of rupees), British Burma comes next (58½ lakhs), and Bengal after (11½ lakhs nearly). Among all the provinces, Bombay receives most raw silk, and British Burma most piece-goods. Bengal seems to call for special remarks. She receives more piece-goods than raw silk: the imports of raw silk which amounted to a value of Rs. 6,358 in 1870-71 rose to Rs. 1,86,694 in 1875-76 and have maintained that level, the exact figure of 1882-83 being Rs. 1,44,737; those of piece-goods which amounted to a value of 9½ lakhs of Rupees in 1870-71 rose to 12½ lakhs in 1875-76, were 17 lakhs in 1881-82, and fell to 7½ lakhs in 1882-83; those of goods of silk mixed with other materials rose from Rs. 40,506 in 1870-71 to nearly 2 lakhs in 1881-82, and 2½ lakhs in 1882-83. It is clear from this that so far as raw silk and piece-goods are concerned there has been scarcely any increase in the imports. The case of the cheaper mixed goods is different; but although it shows an increase of almost five-fold, the value is only 2½ lakhs, as just stated. The total imports into Bengal rose from 10½ lakhs of rupees in 1870-71 to nearly 24 lakhs in 1880-81; then fell to 20 and 11½ lakhs in the two following years, 1881-82 and 1882-83.

The foreign silks imported are not all retained in the country: a small portion is re-exported as shown in the following table, which gives the figures of the last two years. It will be noticed that Bombay takes the lead in the re-exports.

Official year.	Nature of Silk.	EXPORTED FROM					
		Bengal.	Bombay.	Sindh.	Madras.	British Burma.	Total.
		R	R	R	R	R	R
1881-82	Raw Silk . . . . .	...	5,49,723	...	...	1,917	5,51,640
	Thread for sewing . . . .	...	167	...	...	...	167
	Piece-goods	6,499	2,43,707	...	545	216	2,50,967
	Goods of silk mixed with other materials	1,000	35,908	...	...	...	36,908
	Other sorts . . . . .	...	782	...	359	...	1,141
	TOTAL	7,499	8,30,287	...	904	2,133	8,40,823

From Bengal most of the silks go to British Burma, and a small quantity to Madras. From Bombay they go round to British Burma and Sindh, and in smaller quantities to Madras and Bengal. Sind sends to Bombay. British Burma sends to Bengal and Madras. And Madras sends to Bengal and Burma. The following table exhibits the imports thus received:—

Years.	Imported into	Raw Silk.	Piece-goods.	Silk mixed with other materials.	Other sorts.	Total.
		R	R	R	R	R
1880-81	Bengal . . .	...	24,106	...	...	24,106
	Madras . . .	13,094	33,115	...	10,872	57,081
	Bombay . . .	11,235	365	11	...	11,711
	Sindh . . .	3,25,197	62,143	16,567	1,252	4,05,459
	British Burma . . .	398	6,99,746	1,92,232	10,723	9,03,104
	TOTAL .	3,50,024	8,19,565	2,09,110	22,552	14,02,451
1881-82*	Bengal . . .	...	38,775	4,557	1,008	44,340
	Madras . . .	12,081	24,017	500	1,091	37,689
	Bombay . . .	15,600	388	...	...	15,888
	Sindh . . .	2,31,663	1,03,757	16,953	638	3,56,011
	British Burma . . .	200	3,83,562	17,186	750	4,01,698
	TOTAL .	2,62,444	5,50,499	39,106	3,487	8,55,626

* Figures of 1882-83 not yet available.

The net balance of the foreign silks left in each maritime province after the re-exports to foreign countries and to Indian ports coastwise is as follows:—

Years	Bengal.	Bombay.	Sindh.	Madras.	British Burma.	Total
	R	R	R	R	R	R
1880-81 . . .	20,11,544	1,26,31,164	4,27,093	1,00,568	50,28,353	2,31,98,757
1881-82 . . .	18,46,295	93,77,537	3,67,217	91,383	70,55,603	1,87,63,340

showing a decrease in the total value of foreign silks (raw and manufactured) left in the country.

It would be of interest to follow up the distribution of these supplies into the various parts of the country; but accurate statistics are wanting. The following figures, taken from inland trade reports, give an idea of the distribution in the year 1881-82, but include some Indian silks also:—

Distributed into	FROM CALCUTTA.		FROM BOMBAY		FROM SINDH.		FROM MADRAS.		TOTAL.	
	Raw.	Manufd.	Raw.	Manufd.	Raw.	Manufd.	Raw.	Manufd.	Raw	Manufd.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
Bengal . . .	6,724	21,320	2,579	11,563	...	...	...	...	8,103	33,323
North-Western Provinces and Oudh . . .	45,143	34,323	11,758	21,976	...	...	...	...	66,900	56,696
Punjab . . .	81,018	23,374	96,346	132,366	4,428	319	...	...	180,910	168,984
Khairpur . . .	...	...	...	...	26	340	...	...	26	340
Bombay Presidency . . .	42,504	48,304	260,258	267,446	...	...	4,308	1,504	305,072	321,604
Madras Presidency . . .	...	...	8,064	2,280	...	...	...	...	22,275	27,274
Central Provinces . . .	4,100	410	19,162	26,814	...	...	...	...	14,779	19,928
Nizam's Dominions . . .	...	...	12,776	19,858	...	...	...	...	12,776	9,684
Berar . . .	...	...	12,345	8,494	...	...	...	...	12,345	8,494
Malpralase . . .	...	...	3,196	13,366	...	...	...	...	3,196	13,366
TOTAL . . .	178,628	139,144	609,630	606,320	6,423	674	6,534	1,904	609,746	617,944
Quantity lb	178,628	139,144	609,630	606,320	6,423	674	6,534	1,904	609,746	617,944
Value R	10,94,500	12,72,760	30,45,623	24,70,000	21,461	4,384	19,430	6,800	31,45,263	27,22,833

A trade is also carried on from one inland part of the country to another inland part; but the statistics cannot be satisfactorily ascertained from the

Inland Trade of the Punjab in Silk and Silk Manufactures.

	Raw Silk	Manufactured.	Total Value.
	Mds.	Mds.	R
IMPORTED FROM—			
Rajputana	76	8,022*	<i>raw</i> 4,24,800
Bengal (excluding Howrah and Calcutta)	881	250	
Bombay and Madras Presidencies	55	523	<i>manufactured</i> 69,06,000*
North-Western Provinces and Oudh	16	107	...
Sindh	54	4	
TOTAL . . . . .	...	...	73,30,800*
EXPORTED TO—			
Sindh	100	132	<i>raw</i> 1,15,600
North-Western Provinces and Oudh	63	19	
Rajputana	120	10	<i>manufactured</i> 1,66,000
Bengal	5	2	
TOTAL . . . . .	.	...	2,81,600

* Possibly some mistake in the returns of the trade.

Lastly, a trade passes across the inland frontier of India to the following extent (the figures being those of 1881-82):—

From Sindh to Kotra, Khelat and other outlying parts, raw silk Rs. 500, manufactured Rs. 9,377.

Over the Punjab Frontier.

	Raw Silk.	Manufactured.	Total Value.
	Mds.	Mds.	R
IMPORTED FROM—			
Kashmir	303	...	<i>raw</i> 11,42,394
Ladak	111	.	<i>manufactured</i> 15,800
Kabul	2,615	17	
TOTAL	3,209	17	11,58,194
EXPORTED TO—			
Kashmir	12	84	<i>raw</i> 12,908
Ladak . . . . .	..	6	<i>manufactured</i> 56,727
Kabul . . . . .	...	...
Sewasten	28	.	
TOTAL	40	90	69,635

Over the Bengal Frontier.

	Raw Silk. value.	Manufactured. value.	Total Value.
	R	R	R
IMPORTED FROM—			
Nepal . . . . .	...	1,906	1,906
EXPORTED TO—			
Nepal	350	52,955	53,305
Bhutan . . . . .	...	1,318	1,318
TOTAL	350	54,273	54,623

CHAPTER VI.

LATER MEASURES FOR PROMOTING THE SILK INDUSTRY (1882 AND 1883).

THE Government of India at the early part of 1882 took fresh measures in view to promoting the silk industry in the country. The proceedings from this period may be divided under two heads, *viz.*, (1) the extension of mulberry plantation, and (2) the distribution of silkworm eggs.

As regards the first head, the advisability of establishing plantations in some suitable locality was commended to the notice of the Government of the North-Western Provinces in April 1882. That Government in the following month sanctioned, at the recommendation of the Director of the Agricultural Department, the establishment of a nursery¹ in the vicinity of the Forest School at Dehra, and allowed a sum of Rs. 1,000 from surplus money in the arboricultural budget to meet expenses connected with the nursery.

In June of the same year the Government of India offered Local Governments a supply of cuttings of the *multicaulis* variety of the mulberry available at the Botanical Gardens at Saharanpore in the ensuing cold season. And in July it again addressed the Government of the North-Western Provinces desiring that no effort should be spared to extend the cultivation of that variety, and that cuttings be prepared for distribution in the cold weather. Some of the Local Governments availed themselves of the offer made by the Government of India, and their requests were transmitted to the Superintendent of the Saharanpore gardens and were complied by him to the extent shown below :—

Variety of Mulberry.	No of cuttings supplied.	No of plants supplied.	To whom supplied.	Date when supplied.
Morus Sp from Kashmir	...	1,076	Deputy Director, Forest School, Dehra Dun.	Between 10th July and 4th August 1882.
Morus chinensis	100	...	Superintendent, Central Jail, Rampore Banlah	21st December 1882.
" multicaulis	60	...		22nd February 1883.
" " "	200	...		24th " "
" " "	250	...		" " "
" " "	250	...	Superintendent, Central Jail, Berhampore	" " "
" " "	1,000	...	Director, Department of Agriculture, Madras	2nd January 1883.
" " "	18,000	...	Director, Department of Agriculture, British Burma	10th " "
" Sp from Kashmir	2,000	...		" " "
" multicaulis	400	...		25th " "
" " "	...	200	Pondit Ajudhia Prasad, Sadulpore, Saharanpore.	" " "
" " "	...	...	Pondit Hit Ram Dewan, Rewah	21st March 1883.
TOTAL	22,460	1,275		

The Government of Bombay, the Chief Commissioner of Assam, and the Resident at Hyderabad for Berar did not require any cuttings.

As regards the second head, the Government of India made arrangements with Messrs. Lister & Co. of Dehra Dun, through the Director, Department of Agriculture, by which a supply of one pound of silkworm eggs² of the univoltine kind was placed at its disposal for distribution in other provinces in the cold weather of 1882-83, and a regular supply was to be maintained in future years. This done, a circular dated June 1882 was addressed to Local Governments, stating that two ounces of the eggs would be placed at the disposal of each for trial during the ensuing cold weather, and enquiring whether they would purchase one pound of eggs in April 1883 for trial in the following year (*i.e.*, January 1884), and, if so, whether the univoltine or multivoltine variety would be

¹ Of the *multicaulis* variety apparently.

² The price asked by Messrs. Lister & Co. in 1883 was Rs. 5 per ounce.

BENGAL.

The trials in Bengal were at first intended to be made at the Berhampore and Rampore Beaulah Jails; but subsequently they were confined to the latter jail only, and the eggs were therefore sent direct to it, an experienced native rearer procured from the Dún having preceded them.

The eggs from Lister & Co. reached on the 20th January (1883), and a proportion was found to have hatched on the way; the remainder hatched most irregularly, so much so that while the most advanced worms had gone through the third moulting, a considerable portion was only emerging from the eggs.

The quantity or quality of cocoons obtained has not been stated; in fact no information at all has been given either of the mode of rearing or of the produce. Some of the cocoons obtained were apparently sold at a price which has not been mentioned, the rest were kept for seed, and the eggs obtained were sent to the Darjeeling Jail, to be kept there during the hot weather. The quantity of eggs so sent has not been stated.

The China and Kashmir eggs reached Rampore Beaulah on the 23rd February, the latter (of the univoltine kind) were found in splendid condition, the former (multivoltine) had hatched in the proportion of 40 to 45 per cent. on the way, but the rest were good. The hatching of both the China and Kashmir eggs was done successfully enough at the jail, and the worms passed through the third moulting in very healthy condition; but in the fourth moulting they sickened, shrivelled up and died. The rearer was apparently unable to account for this "extraordinary and sudden change." About 300 or 400 worms passed through the fourth moulting and spun small imperfect cocoons. They have been kept for further trial.

Turning to the food supply during the above trials, it seems that the mulberry cultivation was not in a sufficiently advanced stage in the jail for feeding the worms, and that leaves had to be purchased locally.

The Superintendent of the Jail in reporting the trials said that the univoltine worm was not in favour in the Rajshahye district (wherein stands the Rampore Beaulah Jail), and pointed out that the multivoltine was preferred because of the frequency of the returns. He therefore emphasised his opinion that the operations to be of any lasting value should be in the direction of what is most appreciated by the ryots.

The Bengal Government, in forwarding these reports in June 1883, enquired whether a further supply of eggs from China or Kashmir could be made available to continue the trials. The Government of India replied that a supply of Kashmir eggs could probably be obtained from the Superintendent of the Dún.

SAHARANPORE BOTANICAL GARDEN.

Two ounces of eggs were received about the middle of last February from Captain Murray, Dhera Dún. The first worms appeared on the 25th of that month, and the last were hatched on the 20th of March. As they were all kept in the same temperature, such irregularity in hatching seems remarkable. The worms were at first fed solely on *Morus multicaulis*, but as the leaves of that variety of mulberry ran short, those of the common kind (*M. indica*) were given, and were as eagerly devoured as the former. Leaves of *M. alba* and of another variety with broad thin leaves, said to have been introduced from Kashmir, were also given, but the worms did not eat any of them so greedily as the two first named. The total weight of leaves used amounted to 12 lbs. A less quantity would have sufficed if hot dry winds had not prevailed during the greater part of the period they were being fed. The leaves were often too hard and dry for the worms within half an hour after being supplied.

found possible to utilise an old brick cattle-shed, which suited the purpose well. The treatment of the worms is described as follows in the district report:—

"As the worms were hatched each day they were put into lamboo trays, with the dates affixed, and fed on tender leaves, cut very small.

"After a few days the stronger worms would come to the top, and these were again removed to other trays bearing the same date; and so on, till the contents of each tray were distributed into several other trays, to prevent overcrowding. The worms were not handled, but removed from tray to tray by means of small jennies, the leaves being lifted with the worms on them.

"For about 20 days they were kept in trays and then removed on to the tables, when they were fed on whole leaves. The tables were cleaned every second day."

"For the first 20 days the worms were fed on detached leaves cut into small pieces. After this leaves were given them in branches, twigs and all. The leaf given to the worms each day was carefully weighed, and the total weight of foliage used in the experiment was found to be 59 maunds. The superficial area of the trays in which the worms were reared was 130 square feet. This is one-third more space than that allowed in Italy, but one-fifth less than the space which was found necessary in the Dehra experiments.

"6. The mulberry trees in Chhindwara were of two varieties, one having much thicker leaves than the other. Mr. Duthie, Superintendent of the Saharanpur Botanical Gardens, to whom specimens of both varieties were submitted, pronounced the thicker-leaved one of the two to be *Morus atropurpurea*, and the other to be *Morus indica*, the mulberry ordinarily used for silk-growing in Bengal. The Dehra silk rearer from the first preferred the thicker-leaved variety, and the results have shown his preference to have been justified. The worms fed on each variety were kept carefully separate, and the thick-leaved mulberry has been proved to yield much the best silk (see paragraph 12).

"7. The first cocoon was spun on March 22nd, thirty-two days after hatching. The following arrangements were made:—

"To enable the worms to make their cocoons, whole branches with leaves were spread over them, the leaves serving as food for those that had not commenced as yet; other contrivances were also made by tying three branches of cypress together and spreading them like a triangle over the worms; to these they took readily, and the cocoons made on those were cleaner and better than those made under the leaves and branches of the other tables."

"8. It is interesting to note here the temperature which the worms had to endure. It was recorded three times daily, at 7 A.M., 2 P.M., and 10 P.M. The highest temperature registered up to March 19th was 90°, which occurred on five days before that date. The lowest temperature registered was 65°. On March 20th and 21st the thermometer marked 92°, and on March 22nd rose to 94°, which was the maximum registered on each subsequent day of the experiment. After March 22nd the minimum was never below 72°, and on several days the thermometer never fell below 82°. Water was sprinkled on the floor of the shed to keep the temperature down, but it is probable that it was considerably hotter than a grass shed would have been.

"9. The cocoons were weighed as they were cleared each day from the tables, and their total "green" weight was 41 lbs. 12½ ozs. A portion of them were "sun-dried," the chrysalides being killed by exposure to the sun. Another portion were "steamed" at my suggestion in the simple manner used by rearsers of tasar silk in Chhattisgarh districts. The process is described in the report as follows:—

"The steaming was effected by means of two pots; the lower was half filled with water; and a wire floor sieve was put on its mouth, into which the cocoons, a pound at a time, were put; the other pot, its mouth having been broken off, was inverted over the lower one, so as to prevent the steam escaping. Within 15 minutes of each steaming the chrysalides were killed thoroughly, as was tested by opening a few. The steamed cocoons were then dried in the shade, weighed and put away."

"10. When thoroughly dry the cocoons were re-weighed and amounted to 14 lbs. 1½ ozs. They had therefore lost two thirds of their weight, those which were "steamed" losing rather less weight (62 per cent.) than those "sun-dried" (66 per cent.). They were then despatched to Messrs. Thomas & Co.; brokers of Calcutta, who had kindly engaged to have the silk spun and valued. The spinning was effected in the Berhampore factories of the Bengal Silk Company. The cocoons yielded 4 lbs. 3 ozs. of spun silk, and the following results possessing mercantile value:—

	oz.
Type Chaman	10
Fishwa No. 1	1
Fishwa No. 2	1
Gallur	2½

" * Godhur or Low basin waste and husks, worth about Rs. 20."

following passage occurs in the reply made and published by the Secretary of State of the United States of America:

"The Government of the United States has regularly and thoroughly co-operated with the Permanent Central Opium Board and with its associate organ, the Drug Supervisory Body, since their establishment and expects to do so in future, as in the past, as long as their independence is maintained.

"It is the opinion of the Government that it is upon the operation of these two boards, supplementing and co-ordinating the efforts of individual nations, that the entire fabric of international drug control ultimately and principally rests.

"This Government, in accordance with that view, regards it as of the highest importance, not only to the United States, but also to the whole world, that the Permanent Central Opium Board and the Drug Supervisory Body should be enabled to function adequately, effectively and without interruption, and that they should enjoy the co-operation of all nations."

Provision has been made for carrying on the work of the Board and the maintenance of the necessary organization.

EXECUTION OF THE 1925 AND 1927 CONVENTIONS

STATISTICS OF IMPORTATION

For 1928, 1,614 statistical reports were received as compared with 1,631 for 1927.

A list on page 17 shows from which countries returns are due now. The absence of returns from two countries is due to political changes. Of the remainder, a number are Spanish-speaking countries in Latin America. The Board has begun this year to send out its forms to these countries in Spanish and hopes that the governments will make it easier to prepare the returns.

In one country, India, which does not return, valuable progress has been made in completing the information furnished by the Board. The Government of India has agreed in future to obtain, collate and send by mail its returns of statistics regarding Indian States not included in British India and to send them to the Board in time for publication in the annual reports.

FACTS AND ESTIMATES

The following table shows the amounts by which estimates for each drug have been exceeded in 1928, whenever an excess was found or not.

The figures in the last column show the amount by which stocks on hand at the end of the year exceeded the desired level of stocks as shown in column III of the estimates approved by the Supervisory Body. Such excesses do not indicate, necessarily, non-compliance with the provisions of the Convention of 1925, and they may be transitory, because stocks may fluctuate.

Country	Drug	Excess				Stocks
		Manufacture	Consumption	Importation		
		Kg.	Kg.	Kg.	Kg.	Kg.
Denmark	Morphine					58
	Cocaine				76	178
Finland	Morphine	10				50
France	Thebaine	85	25			60
Germany	Thebaine	62	87			
	Egonine methyl ester	30	31			
Greece	Morphine					20
	Cocaine					15

the Board until supplementary estimates have been submitted. Here again the situation is not unfavourable; for such cases have declined. There were seven in 1936, six in 1937 and only four in 1938. Moreover, excesses at the end of 1938 over estimates and supplementary estimates only amounted to 50 kg. This figure is insignificant when compared with the total export trade in the drugs under consideration, which amounted to about 3¼ tons.

It must be remembered, however, that some cases only emerge from returns received in the following year; so that no embargo action can be taken. Nine such cases occurred in 1938 as compared with eleven in 1937.

The number of small excesses which did not justify embargo action has also declined. There were forty-one cases in 1938 as compared with sixty-seven in 1937.¹

MACAO

It was stated in the last report that, at the request of the Board, Dr. Salazar, the Prime Minister of Portugal, had ordered an enquiry to be made into the opium situation in this territory. This enquiry is on the point of conclusion and the Board has received interim reports from Professor Caeiro da Matta, who attended two of its meetings as the representative of the Portuguese Government. The Board desires to express its appreciation of the action taken by the Prime Minister, and proposes to examine the final report of the Portuguese Government at the first opportunity.

PRODUCTION AND STOCKS OF RAW MATERIALS (RAW OPIUM AND COCA LEAVES)

It has never been possible for the Board, owing to the lack of complete statistics, to determine world production. The Board does not receive production statistics from Afghanistan, China and Iran, all producers of raw opium, and from Bolivia and Peru, producers of coca leaves. This deficiency has not been made good in 1938. Returns on stocks are also incomplete. In 1938, it is again impossible to ascertain the real extent of world stocks and their fluctuations. The following analysis therefore relates only to stocks *reported* to the Board:

Raw Opium. — There have always been differences between the Turkish stocks as reported (134 tons in 1937, 213 tons in 1938), and stocks, which, according to the Board's calculations, ought to exist in this country (545 tons in 1937 and 269 tons in 1938). This is due to the existing legislation in Turkey regulating the control of domestic trade, which, as the Government has assured the Board, it is doing its best to amend.

The reported stocks of Yugoslavia and Indo-China are less by 50 and 111 tons respectively than the stocks calculated by the Board from the statistics supplied to it. In both cases, the competent authorities have been asked for explanations.

The progressive decline in the last few years of *declared* stocks continued in 1938 as shown by the following figures:

Stocks at the end of	Tons
1935	2,712
1936	2,480
1937	1,802
1938	1,433

The total stocks of countries which manufacture morphine (including Yugoslavia and Japan, which also produce opium) have fallen by 134 tons, and amounted to 303 tons at the end of 1938, although the stock of three of these countries—Belgium, France and Switzerland—had increased by 25 tons.

In countries where prepared opium is manufactured, the stock of raw opium has fallen by 324 tons, and stood at 869 tons at the end of 1938. All these countries and territories share in the decline, except Thailand (Siam), where the stock has risen by 8 tons. The considerable decline explains the recrudescence of imports into these countries (see World Trade, page 11).

Coca Leaves. — Declared stocks show a tendency to fall.

Stocks at the end of	Tons
1935	644
1936	555
1937	504
1938	402

¹ Codeine and ethylmorphine excluded; import and export statistics are annual for both, and so Article 14 does not apply.

CODEINE AND ETHYLMORPHINE

The returns only begin in 1934 and do not include declared consumption.

Codeine. — About two-thirds of manufactured morphine is converted into codeine, and the same movement occurs in the manufacture of codeine between 1937 and 1938 as has been noted in the manufacture of morphine (28.3 tons in 1937 and 25.5 tons in 1938). Filling up the gaps by taking the last recorded manufacture of missing countries, the figure for manufacture would only be about 5 % less than in 1937, the peak year. Stocks at the end of 1938 (10.6 tons) and imports (4.4 tons) are the highest of the past five years.

Ethylmorphine. — It is in 1937 that the highest manufacture (2,704 kg.) was noted. This figure would probably not be exceeded in 1938 (2,216 kg.) even if all the manufacturing countries had sent in their returns. The same remark applies to stocks. On the other hand, the imports and exports of 1938 are the highest recorded.

WORLD TRADE

The following table shows broadly the trade in 1938 compared with trade in 1937. The totals, particularly for exports, have a very small margin of error. Theoretically, under the Conventions, as all the exports reported by exporting countries should be reported by importing countries as imports, the totals of imports and exports in the following table should balance. Most of them do not. This is mainly due to overlapping of shipments from one year to the next and the lack of returns from certain big importers (e.g., Manchukuo for opium).

World Trade in Narcotics 1937 and 1938

(In kilogrammes.)

Substances	1937		1938	
	Imports	Exports	Imports	Exports
Raw opium	580,748	676,274	555,830	694,890
Coca leaves	495,624	793,990	860,770	777,727
Morphine	1,164	1,175	1,617	1,911
Diacetylmorphine	181	199	151	163
Cocaine	843	914	676	843
Codeine	4,109	5,199	4,466	5,180
Ethylmorphine	528	741	563	839

Imports and exports of cocaine and diacetylmorphine have fallen, imports of codeine and both exports and imports of ethylmorphine have slightly risen; but neither group shows any other specially interesting development. The figures for raw opium, coca leaves and morphine on the other hand show important changes, of which tentative explanations may be given.

RAW OPIUM

The reported exports for 1938 are 139 tons more than the reported imports. The main reason is as follows: Exports reported by Iran (348 tons), exceed imports acknowledged as coming from Iran (262 tons), by 86 tons. As will be seen from the table on page 110, 10 tons, which the Iranian authorities report as having been exported to Japan, are reported as imports by Kwantung; on the other hand, the receipt of 81 tons said to have been sent to places apparently in Kwantung, is not reported. The Board has informed the Government of Iran that Japan and Kwantung deny the receipt of these shipments. The question of the exact destination has never been cleared up.

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Nor do the results of 1938 and the work of 1939 belie this general account. The results show improvements on the previous year and such falling-off in the statistics as occurred was due to political changes. Many small indications go to show that the steady progress of the previous years has been maintained. Discrepancies between import and export statistics are fewer and smaller; there were fewer cases of excesses over estimates involving embargo. It is true that, in every year and for every drug, there are gaps in the statistics of trade, manufacture and stocks because some countries, not always the same, do not send in their returns; and this is regrettable. But while these gaps might make it misleading to make strict comparisons between one year and the next, they are not sufficiently numerous, consistent or large to invalidate certain general conclusions which may be drawn from an examination of the series of figures over a whole decade.

What are the broad results? It is clear that, in the case of all those drugs which figure in the licit traffic and manufacture and the consumption of which is reported by Governments, the quantities consumed have remained stationary or, if anything, declined. The statistics of diacetylmorphine are particularly interesting. For it was the policy of the Conference, which adopted the 1931 Convention, to discourage the use of diacetylmorphine, as being the most dangerous drug; the figures bear out that this policy has been successful. The consumption of morphine has remained stable; manufacture and trade have gone up. There is nothing disquieting in this increase in the morphine figures in the licit trade and the licit manufacture. For this morphine has mostly been absorbed in the increase of manufacture of codeine, and the rest of it has, in the past year or two, gone to increase the stocks of Governments and wholesalers to meet their legitimate anxiety to provide for exceptional calls upon them in the event of war. The results of 1938, and such evidence as is available at present for 1939, confirm once more the general statement made in the last report that, as far as can be judged, the amounts of drugs manufactured in licensed factories have been reduced to the amounts needed throughout the world for medical and scientific requirements, and that a very great task has thus been successfully accomplished.

The outbreak of war in Europe thus finds in running order the international machinery of control which is constituted by the Board and the Supervisory Body. The purpose of the Conventions was social. The need for the international administration they created has been proved; now that war has begun, it becomes greater than ever before. The record of a decade shows that this need has been met and that the control has been attaining the object which Governments had in view. The work of the Board, clearly defined and technical, lies outside the sphere of political disagreements.

In these circumstances, the Board believes that its work ought to continue uninterruptedly. Though it anticipates that war conditions may involve some delay in sending statistics and some temporary imperfections in the records, they need not and should not seriously dislocate the control. It is confident that Governments, parties to the opium Conventions, will share this view; and it is encouraged in this confidence by the first replies it has received from some Governments to its request for continued collaboration, and by the fact that the first batch of quarterly statistics due since the outbreak of the war is coming in normally.

Finally, in the light of these general considerations, the Board desires to comment on two specific points, vital to the continuance of its work. That work depends on two factors: first, the readiness of Governments to continue to carry out the obligation they assumed to send to the Board information, and, secondly, their willingness to contribute the small sums required to enable the international machinery to keep in running order.

As regards the first point, the Board desires once more to emphasise how important it is that all Governments who have collaborated with it, whether Parties to the Conventions or not, and in spite of the difficulties with which some national controls may be faced through the mobilisation of their staff and other war measures, should continue to send fully and regularly the statistics they have been sending.

As regards the second point, the finances of the international control are arranged, under the Conventions, through the League of Nations. The allocation among Governments and the collection of the amounts required is therefore not the responsibility of the Board. But the Board is naturally concerned that the sum should be sufficient. It therefore confines itself to the following comment. The budget now prepared for 1940 shows a reduction of 17% on the current year, and amounts to about 100,000 Swiss francs. The Board is of opinion that this reduction, with which it concurs as a war measure, has brought the provision for the work for which it is responsible to a level below which the execution of its essential duties might be endangered.

(Signed) Atul C. CHATTERJEE,
President.

(Signed) Herbert L. MAY,
Vice-President.

(Signed) A. E. FELKIN,
Secretary.

EXPLANATORY NOTE

1. In the tables, the continents are classified in the following order:

- I. Europe.
- II. America:
 - (a) North America;
 - (b) Mexico and Caribbean;
 - (c) South America.
- III. Asia.
- IV. Africa.
- V. Oceania.

The countries, colonies, protectorates and mandated territories of each continent are classified in the order adopted in the *Statistical Year-Book* of the League of Nations.

2. Countries, colonies, protectorates or mandated territories are only included in the statistical annexes when the quantities concerned are not less than 1 kilogramme.

3. The statistics have been brought up to date, whenever necessary, in the light of information received from Governments since the publication of previous reports.

4. Decimal figures are throughout preceded by a fullstop and not by a comma.

5. The population figures for 1937 and 1938 given in the tables are taken from the *Statistical Year-Book*, 1937/38 and 1938/39 respectively, of the League of Nations.

ABBREVIATIONS

N.R. = No report received.

— = " Nil " or quantities below one kilogramme.

In addition, the above-mentioned statistics have been received for the following colonies, mandated territories, protectorates, etc.:

International Administration:

Tangier.

Anglo-French:

New Hebrides.

Australian:

New Guinea

Norfolk Island

Papua

British:

Aden

Jamaica

St. Helena

Bahamas

Kenya

Sarawak

Barbados

Leeward Islands:

Seychelles

Basutoland

Antigua

Sierra Leone

Bechuanaland

Dominica

Solomon Islands

Bermuda

Montserrat

Somaliland

Burma

St. Kitts and Nevis

Swaziland

Cayman Islands

Virgin Islands

Tanganyika

Ceylon

Malaya and Brunei

Tonga Island

Cyprus

Malta

Trans-Jordan

Falkland Islands

Mauritius

Trinidad and Tobago

Fiji

Nauru ¹

Turks and Caicos Islands

Gambia

Newfoundland

Uganda

Gibraltar

Nigeria and Cameroons

Windward Islands:

Gilbert and Ellice Islands

North Borneo

Grenada

Gold Coast and Togoland

Nyasaland

St. Lucia

British Guiana

Palestine

St. Vincent

British Honduras

Rhodesia, Northern

Zanzibar

Hong-Kong

Rhodesia, Southern

French:

Cameroons

Indo-China

Reunion

French Equatorial Africa

Madagascar

St. Pierre and Miquelon

French Guiana

Martinique

Somali Coast

French India

Morocco (French zone)

Syria and Lebanon

French West Africa

New Caledonia

Togoland

Guadeloupe

Oceania

Tunis

Japanese:

Caroline, Marianne and

Formosa

Kwantung

Marshall Islands

Korea

Dutch:

Curaçao

Netherlands Indies

Surinam

of New Zealand:

Western Samoa

Portuguese:

Angola

Portuguese India

St. Thomas and Principe

Cape Verde Islands

Macao

Timor

Portuguese Guinea

Mozambique

of the U.S.A.:

Philippines

¹ Mandate of the British Empire at present exercised by Australia.

1. — Opium brut, opium médicinal et opium sous forme de teintures, d'extraits et de toutes autres préparations contenant plus de 0.2%, mais pas plus de 20%, de morphine, fabriqués directement avec de l'opium brut ou médicinal (*suite*).

*dependencies, Colonies, et
Britanniques — Br., et.*

1. — Raw Opium, Medicinal Opium and Opium in the Form of Tinctures, Extracts, and such Other Preparations containing more than 0.2%, but not more than 20%, of Morphine as are made direct from Raw or Medicinal Opium (cont.)

[illegible]

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Pays	Année	Population en millions	Stocks à la fin de l'année précédente	1	2	3	4	5	6	7	8	9	III	Country
	Year	in millions	held at the end of previous year	Production of raw opium	Quantity imported (including the quantity imported for Government purposes)	Quantity confiscated which has been released or added to stocks	Quantity imported or bought in the country for Government purposes	Quantity consumed	Consumption per million inhabitants	Quantity of raw opium used in the manufacture of morphine	Quantity exported	Total of columns 5 to 8	Stocks held at the end of the year	
<i>Afrique (suite)</i>														
<i>UNION SUD-AFRICAINE</i>														
	1937	9.707	278	N.R.	384	N.R.	663	9	414	N.R.	42.65	11	434	Africa (continued)
	1938	9.889	247	N.R.	390	N.R.	663	N.R.	N.R.	N.R.	12.5	12	247	UNION OF SOUTH AFRICA
<i>Administration internationale :</i>														
TANGER	1937	0.08	N.R.	N.R.	—	N.R.	—	N.R.	—	—	—	—	—	International Administration:
	1938	0.08	N.R.	—	—	—	—	—	—	—	—	—	—	TANGIER
<i>Dépendances, Colonies, etc. :</i>														
<i>britanniques :</i>														
DE L'OR ET TOGO SOUS MANDAT BRITANNIQUE	1937	3.65	—	—	—	—	—	—	—	—	—	—	—	Dependencies, Colonies, etc.:
	1938	3.747	—	—	—	—	—	—	—	—	—	—	—	British:
ET CAMEROUN SOUS MANDAT BRITANNIQUE	1937	0.2	—	—	—	—	—	—	—	—	—	—	—	GOLD COAST AND TOGOLAND UNDER BRITISH MANDATE
	1938	0.2	—	—	—	—	—	—	—	—	—	—	—	UNDER BRITISH MANDATE
	1937	20.191	—	—	—	—	—	—	—	—	—	—	—	GAMBIA
	1938	20.477	—	—	—	—	—	—	—	—	—	—	—	NIGERIA AND CAMEROONS UNDER BRITISH MANDATE

1. — Raw Opium, Medicinal Opium and Opium in the Form of Tinctures, Extracts, and such Other Preparations containing more than 0.2%, but not more than 20%, of Morphine as are made direct from Raw or Medicinal Opium (*cont.*).

Africa (concluded) — 32 —
dependencies, Colonies, etc. (cont.):
French (continued):

2. Feuilles de coca (suite).

[illegible]

2.	Feuilles de coca (<i>fin</i>).
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[illegible]

3. Préparations galéniques de chanvre indien. — Galenical Preparations of Indian Hemp.

Pays	Année	Population en millions	1		2	3	4	5		6		7	Country
			Stocks à la fin de l'année précédente	Stocks held at the end of previous year				Quantité importée	Quantité confiscated which has been released or added to stocks	Quantité importée ou achetée dans le pays pour les besoins de l'Etat	Quantity consumed			Consumption par million d'habitants	Quantité exportée	Stocks held at the end of the year
Europe													
ALBANIE	1937 1938	1.1 1.12	N.R. N.R.										ALBANIA
ALLEMAGNE (a)	1937 1938	67.587 74.826	1 465 943										GERMANY (a)
AUTRICHE (b)	1937	6.76	44										AUSTRIA (b)
BELGIQUE	1937 1938	8.331 8.361	101 207										BELGIUM
BULGARIE	1937 1938	6.238 6.319	53 58										BULGARIA
DANEMARK	1937 1938	3.762 3.79	72 108										DENMARK
DANTZIG	1937 1938	0.405 0.405	2										DANZIG
ESPAGNE	1937 1938	25.05 25.05	N.R. 12										SPAIN
ESTONIE	1937 1938	1.13 1.131	9 6										ESTONIA
FINLANDE	1937 1938	3.603 3.63	43 20										FINLAND
FRANCE	1937 1938	41.91 41.97	(d) (d)										FRANCE
8													

4. — Chanvre indien. — Indian Hemp.

Pays	Année	Population en millions	Quantité importée	Quantité exportée	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Country
	Year	Population in millions	Quantity imported	Quantity exported	Quantity confiscated which has been released or added to stocks	
Europe			Kg.	Kg.	Kg.	Europe
ALLEMAGNE (a)	1937	67.587	4 032	1 059	—	GERMANY (a)
	1938	74.826	469	616	—	
AUTRICHE (b)	1937	6.76	9	—	—	AUSTRIA (b)
BELGIQUE	1937	8.331	180	—	—	BELGIUM
	1938	8.361	150	—	—	
BULGARIE	1937	6.238	11	—	—	BULGARIA
	1938	6.319	19	—	—	
DANEMARK	1937	3.762	169	—	—	DENMARK
	1938	3.79	72	—	—	
ESTONIE	1937	1.13	9	—	—	ESTONIA
	1938	1.131	20	—	—	
FINLANDE	1937	3.603	1	—	—	FINLAND
	1938	3.63	4	—	—	
FRANCE	1937	41.91	365	20	6	FRANCE
	1938	41.97	—	—	—	
ITALIE	1937	42.677	(c) —	(c) 2	N.R.	ITALY
	1938	43.029	N.R.	N.R.	N.R.	
LETTONIE	1937	1.965	50	—	—	LATVIA
	1938	1.971	81	—	—	
LITHUANIE	1937	2.527	—	—	—	LITHUANIA
	1938	2.55	2	—	—	
NORVÈGE	1937	2.894	11	—	—	NORWAY
	1938	2.906	20	—	—	
PAYS-BAS	1937	8.557	6	—	—	NETHERLANDS
	1938	8.64	10	—	—	
POLOGNE	1937	34.221	10	—	—	POLAND
	1938	34.515	30	—	N.R.	
PORTUGAL	1937	7.301	60	—	—	PORTUGAL
	1938	7.38	30	—	—	
ROYAUME-UNI	1937	47.332	3 654	9	—	UNITED KINGDOM
	1938	47.532	—	479	—	
SUÈDE	1937	6.267	16	—	—	SWEDEN
	1938	6.285	4	—	—	
SUISSE	1937	4.174	4	1 495	—	SWITZERLAND
	1938	4 183	—	—	—	
TCHÉCOSLOVAQUIE	1937	15.213	88	—	—	CZECHOSLOVAKIA
	1938	15.27	(d) 31	(d) —	N.R.	
U.R.S.S.	1937	175.5	—	—	199	U.S.S.R.
	1938	169.—	5	—	9	

- (a) En 1938, y compris l'Autriche.
 (b) En 1938, les données relatives à l'Autriche sont comprises dans celles de l'Allemagne; le seul chiffre relatif à l'Autriche qu'ait reçu le Comité est celui — fourni par les autorités allemandes — de l'importation au cours du deuxième trimestre: 6 kg.
 (c) Deux relevés trimestriels manquent.
 (d) Un relevé trimestriel manque.
 (a) In 1938, including Austria.
 (b) In 1938, the figures relating to Austria are included in the statistics for Germany; the only figure received by the Board in respect of Austria is the one—furnished by the German authorities—regarding imports during the second quarter: 6 kg.
 (c) Returns for two quarters missing.
 (d) Return for one quarter missing.

5. — Résine de chanvre indien. — Indian Hemp Resin.

Pays	Année	Population en millions	Quantité importée	Quantité exportée	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Country
	Year	Population in millions	Quantity imported	Quantity exported	Quantity confiscated which has been released or added to stocks	
Asie			Kg.	Kg.	Kg.	Asia
INDE	1937 1938	358.6 362.—	87 864 144 876	7 11	(a) 2 (a) 2	INDIA
<i>Dépendances, Colonies, etc.</i>						<i>Dependencies, Colonies, etc.</i>
<i>françaises :</i>						<i>French :</i>
ETABLISSEMENTS DANS L'INDE	1937 1938	0.3 0.3	8 12	— —	— —	FRENCH INDIA

(a) Cette donnée ne se réfère qu'à l'Inde britannique.

(a) This information only refers to British India.

5. — Résine de chanvre indien. — Indian Hemp Resin.

Pays	Année	Population en millions	Quantité importée	Quantité exportée	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Country
	Year	Population in millions	Quantity imported	Quantity exported	Quantity confiscated which has been released or added to stocks	
Asie			Kg.	Kg.	Kg.	Asia
INDE	1937 1938	358.6 362.—	87 864 144 876	7 11	(a) 2 (a) 2	INDIA
Dépendances, Colonies, etc. françaises :						Dependencies, Colonies, etc. French :
ETABLISSEMENTS DANS L'INDE	1937 1938	0.3 0.3	8 12	— —	— —	FRENCH INDIA

(a) Cette donnée ne se réfère qu'à l'Inde britannique.

(a) This information only refers to British India.

6. — Morphine (*suite*).

Pays	Année	Popula- tion en millions	A Total des éva- luations	1 Stocks à la fin de l'année précédente	2 Quantité de morphine fabriquée (y compris les quantités utilisées pour la fabrication des substances mentionnées sous 8 à 10)	3 Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	B Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	4 Quantité confisquée qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat	6 Quantité consom- mée
Country	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity of morphine manufactured (including the quantities used in the manufacture of the substances mentioned under 8-10)	Quantity imported (including the quanti- ty im- ported for Government purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Convention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes	Quantity consumed
Europe (<i>suite</i>) — (<i>cont.</i>).											
ITALIE	1937	42.677	1 207	485	N.R.	(a) 1		N.R.		N.R.	N.R.
ITALY	1938	43.029	1 120	N.R.	N.R.	N.R.		N.R.		N.R.	N.R.
LETTONIE	1937	1.965	14	22	—	12	14	—	34	—	20
LATVIA	1938	1.971	59	14	—	58	59	—	72	—	12
LITHUANIE	1937	2.527	8	4	—	6	8	—	10	—	3
LITHUANIA	1938	2.55	8	6	—	6	8	—	12	—	3
LUXEMBOURG	1937	0.298	4	8	—	—	4	—	8	—	2
LUXEMBURG	1938	0.301	9	7	—	—	9	—	7	—	1
NORVÈGE	1937	2.894	52	61	11	40	46	—	112	—	52
NORWAY	1938	2.906	111	55	7	93	108	—	155	32	57
PAYS-BAS	1937	8.557	1 372	38	1 220	11	224	—	1 269	—	59
NETHERLANDS	1938	8.64	1 641	39	1 093	7	619	—	1 139	—	64
POLOGNE	1937	34.221	845	84	(b) 810	—	47	—	894	15	50
POLAND	1938	34.515	790	85	N.R.	1		N.R.		N.R.	N.R.
PORTUGAL	1937	7.301	16	26	—	18	16	—	44	—	19
	1938	7.38	27	25	—	17	27	—	42	—	17
ROUMANIE	1937	19.423	45	25	—	147	45	—	172	32	83
ROUMANIA	1938	19.646	188	52	—	16	188	—	68	—	37
ROYAUME-UNI	1937	47.332	2 780	(c) 620	(d) 1 810	(e) 26	1 235	—	2 456	2	373
UNITED KINGDOM	1938	47.532	2 567	(c) 526	(d) 1 890	(e) 50	934	—	2 466	7	390
SUÈDE	1937	6.267	478	58	157	45	333	—	260	—	60
SWEDEN	1938	6.285	1 086	56	65	385	1 021	—	506	270	61
SUISSE	1937	4.174	2 170	958	(f) 1 507	12	923	13	2 490	—	51
SWITZERLAND	1938	4.183	2 236	1 274	2 265	23	374	—	3 562	200	(g) 148
TSÉCOSLOVAQUIE	1937	15.313	665	36	1 037	12	—	—	1 085	—	126
TSCHOSLOVAKIA	1938	15.37	670	52	N.R.	(h) 12		N.R.		N.R.	N.R.

(a) Dans ce pays l'importation manque.

(b) Quantité de morphine br. de paille de pavot.

(c) En 1937, le stock de morphine brute s'élevait à 183 kg. au début de 1937; à 181 kg. à la fin de 1937 et à 91 kg. à la fin de 1938.

(d) En 1937 et 1938, on obtint de 457 kg. et 362 kg., respectivement, de morphine brute.

(e) La morphine brute importée en 1937 et 271 kg. en 1938 contenant respectivement 354 kg.

(f) Quantité de morphine br. de paille de pavot.

(g) Quantité de morphine br. de paille de pavot.

(h) Quantité de morphine br. de paille de pavot.

6. — Morphine (suite).

Pays	Année	Popula- tion en millions	A Total des éva- luations	1 Stocks à la fin de l'année précédente	2 Quantité de morphine fabriquée (y compris les quantités utilisées pour la fabrication des substances mentionnées sous 8 à 10)	3 Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	B Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	4 Quantité confisquée qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat	6 Quantité consom- mée
Country	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity of morphine manufactured (including the quantities used in the manufacture of the substances mentioned under 8-10)	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Conven- tion	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes	Quantity consumed
Europe (suite) — (cont.).			Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
TURQUIE	1937	16.49	26	12	—	19	26	—	31	N.R.	10
TURKEY	1938	16.8	26	21	—	—	26	—	21	N.R.	4
U.R.S.S.	1937	175.5	7 988	498	7 755	—	233	—	8 253	—	1 136
U.S.S.R.	1938	169.—	8 000	1 792	8 098	—	—	—	9 890	—	1 292
YUGOSLAVIE	1937	15.174	510	36	707	2	—	—	745	—	25
YUGOSLAVIA	1938	15.4	550	314	615	1	291	—	930	—	28
Amérique du Nord North America											
CANADA	1937	11.08	123	141	—	112	123	—	253	—	106
	1938	11.165	127	147	—	88	131	—	235	—	95
ETATS-UNIS D'AMÉRIQUE .	1937	128.84	10 296	1 744	10 256	—	44	1	12 001	—	2 050
UNITED STATES OF AMERICA	1938	129.818	10 431	1 940	8 625	—	1 809	8	10 573	—	1 978
TERRE-NEUVE	1937	0.288	2	—	—	2	2	—	2	—	—
NEWFOUNDLAND	1938	0.289	2	—	—	1	2	—	1	—	—
Mexique, Amérique Centrale et Antilles Mexico and Caribbean											
MEXIQUE	1937	19.003	20	18	—	5	20	—	23	—	6
MEXICO	1938	19.32	17	19	—	2	17	—	21	—	3
COSTA-RICA	1937	0.592	5	N.R.	N.R.	—	—	N.R.	—	N.R.	N.R.
	1938	0.607	3	N.R.	N.R.	1	—	N.R.	—	N.R.	N.R.
CUBA	1937	4.37	8	1	—	5	8	—	—	N.R.	N.R.
	1938	4.2	8	2	—	5	8	—	7	—	7
RÉPUBLIQUE DOMINICAINE .	1937	1.52	3	N.R.	—	(b) 1	—	—	—	—	—
DOMINICAN REPUBLIC . . .	1938	1.587	3	—	—	—	3	—	—	N.R.	N.R.
GUATEMALA	1937	2.42	2	2	N.R.	—	—	N.R.	—	N.R.	N.R.
	1938	3.002	2	N.R.	—	1	2	—	—	—	—
NICARAGUA	1937	0.85	4	N.R.	N.R.	—	—	N.R.	—	N.R.	N.R.
	1938	0.9	4	1	N.R.	—	—	N.R.	—	N.R.	N.R.
SALVADOR	1937	1.632	3	2	—	—	3	—	2	—	—
	1938	1.665	3	2	—	1	3	—	3	—	1

(a) Vu la différence entre ce renseignement et le chiffre III, le Comité a demandé aux autorités compétentes de réexaminer les statistiques.

(b) Un relevé trimestriel manque.

6. — Morphine (suite).

Pays	Année	Popula- tion en millions	A	1	2	3	B	4	I	5	6
Country	Year	Popula- tion in millions	Total des éva- luations	Stocks à la fin de l'année précédente	Quantité de morphine fabriquée (y compris les quantités utilisées pour la fabrication des substances mentionnées sous 8 à 10)	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat	Quantité consom- mée
				Stocks held at the end of previous year	Quantity of morphine manufactured (including the quantities used in the manufacture of the substances mentioned under 8-10)	Quantity imported (including the quanti- ty im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes	Quantity consumed
Amérique Centrale et Antilles (suite). Caribbean (continued).			Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
<i>Dépendances, Colonies, etc.: britanniques:</i>											
<i>Dependencies, Colonies, etc.: British:</i>											
JAMAÏQUE	1937	1.139	1	—	—	—	1	—	—	—	—
JAMAICA	1938	1.153	1	—	—	—	1	—	—	—	1
Amérique du Sud South America											
ARGENTINE	1937	12.562	75	N.R.	—	45	77	—	—	—	29
	1938	12.762	84	54	8	33	77	N.R.	—	N.R.	N.R.
BOLIVIE	1937	3.—	5	N.R.	N.R.	—	—	N.R.	—	—	1
BOLIVIA	1938	3.3	5	N.R.	N.R.	2	—	N.R.	—	N.R.	N.R.
BRÉSIL	1937	42.395	60	N.R.	N.R.	26	—	N.R.	—	N.R.	N.R.
BRAZIL	1938	43.247	60	N.R.	N.R.	10	—	N.R.	—	N.R.	N.R.
CHILI	1937	4.552	29	13	—	24	29	—	37	—	25
CHILE	1938	4.597	35	12	—	26	35	—	38	—	23
COLOMBIE	1937	8.76	10	12	—	12	10	—	24	—	8
COLOMBIA	1938	8.6	10	4	—	8	10	—	12	—	7
EQUATEUR	1937	3.—	1	2	—	1	1	—	3	—	—
ECUADOR	1938	3.—	1	1	N.R.	(b) —	—	N.R.	—	N.R.	N.R.
PÉROU	1937	7.—	3	N.R.	N.R.	2	—	N.R.	—	N.R.	N.R.
PERU	1938	7.1	7	N.R.	N.R.	(c) 2	—	N.R.	—	N.R.	N.R.
URUGUAY	1937	2.066	8	9	—	5	8	—	14	—	5
	1938	2.093	8	9	—	4	8	—	13	—	5
VENEZUELA	1937	3.428	5	11	—	4	5	—	15	—	7
	1938	3.53	5	9	—	3	5	—	12	—	6
<i>Dépendances, Colonies, etc.: britanniques:</i>											
<i>Dependencies, Colonies, etc.: British:</i>											
GUYANE BRITANNIQUE . .	1937	0.333	1	—	—	1	1	—	1	—	1
BRITISH GUIANA	1938	0.337	2	2	—	—	2	—	2	—	1
Asie — Asia											
AFGHANISTAN	1937	7.—	5	7	N.R.	—	—	N.R.	—	N.R.	N.R.
	1938	7.—	5	N.R.	N.R.	3	—	N.R.	—	N.R.	—
CHINE	1937	450.—	400	N.R.	N.R.	—	—	—	—	N.R.	N.R.
CHINA	1938	450.—	800	N.R.	(d) 52	(c) 13	—	—	—	N.R.	37

(a) Le chiffre du stock fait l'objet d'une enquête du Comité.

(b) Trois relevés trimestriels manquent.

(c) Un relevé trimestriel manque.

(d) Obtenus de 164 kg. de morphine brute confisquée.

6. — Morphine (*suite*).

Pays	Année	Popula- tion en millions	A Total des éva- luations	1 Stocks à la fin de l'année précédente	2 Quantité de morphine fabriquée (y compris les quantités utilisées pour la fabrication des substances mentionnées sous 8 à 10)	3 Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	B Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	4 Quantité confisquée qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat	6 Quantité consom- mée
Country	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity of morphine manufactured (including the quantities used in the manufacture of the substances mentioned under 8-10)	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Go- vernment purposes	Quantity consumed
Asie (suite). — Asia (cont.)			Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
INDE (a) (b)	1937	358.6	153	150	(c) 61	21	93	—	—	6	(d) 175
INDIA (a) (b)	1938	362.—	146	76	(c) 83	28	70	—	187	6	(d) 152
IRAK	1937	3.6	2	3	—	1'	2	—	4	—	1
IRAQ	1938	3.67	3	3	—	—	3	—	3	—	—
IRAN	1937	15.—	5	N.R.	N.R.	2	—	N.R.	—	N.R.	N.R.
	1938	15.—	11	N.R.	N.R.	10	—	N.R.	—	N.R.	N.R.
JAPON	1937	70.5	4 849	211	(g) 4 798	(h) 24	71	—	5 033	1	1 478
JAPAN	1938	71.5	4 593	351	(g) 4 549	(h) 38	78	—	4 938	2	1 520
THAÏLANDE	1937	14.4	—	1	—	—	—	—	1	—	—
THAILAND	1938	14.65	1	—	—	1	1	—	1	—	—
<i>Dépendances, Colonies, etc. : britanniques : Dependencies, Colonies, etc. : British :</i>											
BIRMANIE (b)	1937	15.6	2	—	—	2	2	—	—	—	2
BURMA (b)	1938	15.797	3	—	—	12	3	—	12	—	12
BORNÉO SEPTENTRIONAL . .	1937	0.291	—	1	—	—	—	—	1	—	—
NORTH BORNEO	1938	0.299	—	—	—	—	—	—	—	—	—
CEYLAN	1937	5.758	4	2	—	3	4	—	5	—	3
CEYLON	1938	5.86	6	2	—	3	6	—	5	—	3
HONG-KONG	1937	1.—	3	—	—	2	3	—	2	—	1
	1938	1.01	1	—	—	4	4	—	4	—	1
MALAISIE BRITANNIQUE ET BRUNÉI	1937	4.844	11	6	—	7	11	—	13	—	3
BRITISH MALAYA AND BRUNEI	1938	5.174	6	9	—	5	6	—	14	4	3
<i>des Etats-Unis : of the U.S.A. :</i>											
PHILIPPINES	1937	13.35	18	6	—	3	18	—	9	—	2
	1938	13.6	15	5	—	4	15	—	9	—	4
<i>françaises : — French :</i>											
INDOCHINE FRANÇAISE . . .	1937	23.15	2	5	—	2	2	—	7	—	—
FRENCH INDO-CHINA . . .	1938	23.3	2	3	—	2	2	—	5	—	—
<i>japonaises : — Japanese :</i>											
CORÉE	1937	23.38	5	174	—	2	6	2	178	—	20
KOREA	1938	23.64	—	127	—	2	—	—	129	—	27

(a) Les données concernant les stocks, la fabrication, la transformation, les confiscations et les achats pour les besoins de l'Etat ne se réfèrent qu'à l'Inde britannique.

(b) A partir du 1^{er} avril 1937, la Birmanie ne fait plus partie de l'Inde. La Birmanie ayant fourni ses propres statistiques depuis cette date, il n'est pas possible d'établir le bilan de 1937.

(c) En outre, 449 kg. de morphine brute ont été fabriqués en 1937 et 454 kg. en 1938, contenant respectivement 336 kg. et 331 kg. de morphine pure.

(d) Y compris 7 kg. livrés aux Etats indiens.

(e) En outre, 453 kg. de morphine brute ont été exportés en 1937 et 272 kg. en 1938, contenant respectivement 349 kg. et 213 kg. de morphine pure.

(f) Vu la différence entre ce renseignement et le chiffre de la colonne III, le Comité a demandé aux autorités compétentes de réexaminer les statistiques.

(g) Y compris 782 kg. en 1937 et 1.360 kg. en 1938, obtenus de 1.150 kg. et 2.081 kg., respectivement, de morphine brute.

(h) En outre, 778 kg. en 1937 et 1.399 kg. en 1938, contenus dans de la morphine brute, ont été importés.

6. — Morphine (suite).

Pays	Année	Popula- tion en millions	A	1	2	3	B	4	1	5	6
			Total des fabri- cations	Stocks à la fin de l'année précédente	Quantité de morphine fabriquée (y compris les quantités utilisées pour la fabrication des substances mentionnées sous 8 à 10)	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'Art. 12 de la Conven- tion de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat	Quantité consom- mée
Country	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity of morphine manufactured (including the quantities used in the manufacture of the substances mentioned under 8-10)	Quantity imported (including the quantity imported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Convention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes	Quantity consumed
Asie (suite).											
Asia (continued)											
Dépendances, Colonies, etc.											
(suite):											
Dependencies, Colonies, etc.											
(cont'd.):											
japonaises (suite):											
Japanese (cont'd.):											
FORMOSE (a)	1937	5.31	16	4	—	11	16	—	15	—	6
FORMOSA (a)	1938	5.446	12	8	—	11	12	—	19	—	13
KOUAN-TOUNG	1937	1.7	51	24	28	5	23	7	64	—	33
KWANTUNG	1938	1.75	40	31	23	7	17	—	61	—	33
néerlandaises :											
Dutch :											
INDES NÉERLANDAISES . . .	1937	66.4	8	6	—	5	8	—	11	—	54
NETHERLANDS INDIES . . .	1938	67.4	8	5	—	8	8	—	13	5	2
Territoires sous mandat :											
British :											
Mandated Territories :											
British :											
PALASTINE	1937	1.36	8	—	—	2	8	—	2	—	2
	1938	1.4	8	—	—	1	8	—	1	—	1
français :											
French :											
SYRIE ET LIBAN	1937	3.5	8	—	—	1	8	—	1	—	1
SYRIA AND LEBANON	1938	3.6	8	1	—	2	8	—	3	—	2
Afrique											
Africa											
EGYPTE	1937	15.86	1	3	—	—	1	—	3	—	1
EGYPT	1938	16.03	1	2	—	1	1	—	3	—	1
UNION SUD AFRICAINE . . .	1937	9.707	39	16	—	25	39	—	41	—	23
UNION OF SOUTH AFRICA . .	1938	9.889	37	16	N.R.	30	—	N.R.	—	N.R.	N.R.
Belles Indes, Colonies, etc.											
Dutch Indies :											
Indo-Netherlands, Colonies, etc.											
British :											
COÛTE D'OR ET TESSIE . . .	1937	3.65	5	3	—	1	5	—	4	—	—
COÛTE D'OR AND TESSIE . . .	1938	3.747	2	1	—	—	2	—	1	—	—
Néerlandaises et Colonies, etc.											
Dutch and Colonies, etc.											
British :											
NOUVELLE CALÉDONIE	1937	2.101	5	1	—	—	5	—	1	—	1
NOUVELLE CALÉDONIE	1938	2.177	5	2	—	1	5	—	3	—	—

Les données de la Commission de l'Opium à Paris et les quantités indiquées de morphine pure contenues dans de la morphine brute de stocks à la fin de l'année 1937 et 1938, et la fin de 1937 et 1938, fabriquée en 1937 et 1938, et les quantités indiquées de morphine pure en 1937 et 1938.

7. — Diacétylmorphine (diamorphine, héroïne).

Pays	Année	Popula- tion en millions	A Total des éva- luations	1 Stocks à la fin de l'année précédente	2 Quantité fabriquée	3 Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	B Quantité maximum dont l'im- portation est per- mise aux termes de l'Art. 12 de la Conven- tion de 1931	4 Quantité conduite qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat
Country	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity concentrated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes
Europe										
ALLEMAGNE (a)	1937	67 587	3	65	65	—	—	—	130	—
GERMANY (a)	1938	74 826	4	85	29	—	6	2	116	—
BELGIQUE	1937	8 331	10	18	41	—	—	—	59	—
BELGIUM	1938	8 361	15	17	31	—	1	—	48	—
DANEMARK	1937	3 762	17	5	—	20	24	—	25	—
DENMARK	1938	3 79	20	7	—	10	26	—	17	—
FINLANDE	1937	3 603	38	13	—	33	38	—	46	1
FINLAND	1938	3 63	44	13	1	39	43	—	53	—
FRANCE	1937	41 01	80	74	69	—	13	—	143	—
	1938	41 07	80	77	67	—	17	—	144	—
HONGRIE	1937	8 989	9	5	2	—	7	—	7	—
HUNGARY	1938	9 035	5	4	—	—	5	—	4	—
ITALIE	1937	42 677	178	111	N.R.	— (c)	—	N.R.	—	N.R.
ITALY	1938	43 029	171	N.R.	N.R.	N.R.	—	N.R.	—	N.R.
LITHUANIE	1937	2 527	1	1	—	—	1	—	1	—
LITHUANIA	1938	2 55	1	1	—	—	1	—	1	—
NORVÈGE	1937	2 894	1	1	—	—	1	—	1	—
NORWAY	1938	2 906	1	—	—	1	1	—	1	—
PAYS-BAS	1937	8 557	7	18	9	—	5	—	27	—
NETHERLANDS	1938	8 64	5	20	1	—	9	—	21	—
POLOGNE	1937	34 221	—	4	—	—	—	—	4	—
POLAND	1938	34 515	—	4	N.R.	—	—	N.R.	—	N.R.
PORTUGAL	1937	7 301	8	8	—	5	8	—	13	—
	1938	7 38	6	8	—	3	6	—	11	—
ROUMANIE	1937	19 423	15	—	—	23	15	—	23	—
ROUMANIA	1938	19 646	16	7	—	5	16	—	12	—
ROYAUME-UNI	1937	47 332	95	85	99	2	56	—	186	—
UNITED KINGDOM	1938	47 532	102	67	90	—	52	—	157	—
SUÈDE	1937	6 267	19	10	24	—	4	—	34	—
SWEDEN	1938	6 285	31	7	14	—	17	—	21	—
SUISSE	1937	4 174	4	19	43	—	—	—	62	—
SWITZERLAND	1938	4 183	14	30	41	—	9	—	71	—
TCHÉCOSLOVAQUIE	1937	15 213	2	2	1	—	1	—	3	—
CZECHOSLOVAKIA	1938	15 27	2	2	N.R.	(c) —	—	N.R.	—	N.R.
TURQUIE	1937	16 49	2	3	—	1	2	—	4	N.R.
TURKEY	1938	16 8	2	3	—	—	2	—	3	N.R.

(a) En 1938, y compris l'Autriche.

(b) Transformés en morphine.

(c) Deux relevés trimestriels manquent.

(d) La réponse des autorités roumaines à l'enquête du Comité laisse subsister la divergence entre ce chiffre et celui de la colonne III.

(e) Un relevé trimestriel manque.

7. — Diacétylmorphine (diamorphine, héroïne) (suite).

Pays	Année	Population en millions	A Total des déclarations	1 Stocks à la fin de l'année précédente	2 Quantité fabriquée	3 Quantité importée par commerce légal, moins la quantité importée pour les besoins de l'Etat	B Quantité maximum dont l'importation est permise aux termes de l'art. 22 de la Convention de 1953	4 Quantité confisquée qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat
Country	Year	Population in millions	Total of estimates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quantity imported for Government purposes)	The maximum quantity which is permitted to be imported under Art. 22 of the 1953 Convention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Government purposes
Europe (suite) — (continued)										
U.R.S.S.	1937	173.5	312	28	291	—	27	—	319	—
U.S.S.R.	1938	169.—	197	42	125	—	29	—	179	—
YUGOSLAVIE	1937	15.174	2	—	7	—	—	—	7	—
YUGOSLAVIA	1938	15.4	2	6	9	—	—	—	15	—
Amérique du Nord North America										
CANADA	1937	11.05	23	31	—	22	23	—	53	—
	1938	11.163	22	29	—	24	23	—	53	—
ETATS-UNIS D'AMÉRIQUE	1937	125.84	—	4	—	—	—	—	4	—
UNITED STATES OF AMERICA	1938	129.813	—	3	—	—	—	—	3	—
Amérique Centrale Caribbean										
CUBA	1937	4.37	—	—	—	—	—	—	—	—
	1938	4.2	—	—	—	—	—	—	—	—
Amérique du Sud South America										
ARGENTINE	1937	12.552	29	N.R.	—	11	23	—	—	—
	1938	12.762	23	16	—	11	23	N.R.	—	N.R.
BOLIVIE	1937	3.—	1	N.R.	N.R.	—	—	N.R.	—	—
BOLIVIA	1938	3.3	2	N.R.	N.R.	1	—	N.R.	—	N.R.
COLOMBIE	1937	8.75	3	1	—	4	3	—	5	—
COLOMBIA	1938	8.6	2	1	—	1	2	—	2	—
EQUATEUR	1937	3.—	1	1	—	—	1	—	1	—
ECUADOR	1938	3.—	1	2	N.R.	(a) —	—	N.R.	—	N.R.
PARAGUAY	1937	7.—	2	N.R.	N.R.	1	—	N.R.	—	N.R.
PARAGUAY	1938	7.1	2	N.R.	N.R.	(b) —	—	N.R.	—	N.R.
URUGUAY	1937	2.066	7	8	—	5	7	—	13	—
	1938	2.093	7	9	—	1	7	—	10	—
VENEZUELA	1937	3.418	—	1	—	—	—	—	1	—
	1938	3.53	—	1	—	—	—	—	1	—
Asie — Asia										
CHINE	1937	450.—	—	N.R.	N.R.	—	—	—	—	N.R.
CHINA	1938	450.—	—	N.R.	—	(c) —	—	—	—	N.R.
INDONÉSIE	1937	338.6	7	5	—	3	7	—	8	—
INDONESIA	1938	352.—	11	2	—	5	11	—	7	—
JAPON	1937	70.5	219	71	200	—	49	—	276	—
JAPAN	1938	71.3	199	60	200	—	—	—	260	—

(a) Total des six trimestres manquants.

(b) Un relevé trimestriel manquant.

(c) Les données concernant les stocks d'heroina ont été transformées en quantités et les achats pour les besoins de l'Etat ne sont plus qu'un simple nombre.

7. — Diacétylmorphine (diamorphine, héroïne) (*fin*).

Pays	Année	Produit en tonnes métriques	A	1	2	3	B	4	I	5
			Total des 1937 1938	Stocks au 1 ^{er} janvier 1937	Quantité importée	Quantité importée de l'étranger en tonnes métriques 1937	Quantité importée de l'étranger en tonnes métriques 1938	Quantité importée de l'étranger en tonnes métriques 1937	Total des 1937 1938	Quantité importée de l'étranger en tonnes métriques 1937
Asie (suite) — Asia (continued)			kg	kg	kg	kg	kg	kg	kg	kg
<i>Indonésie, Colombie, et Indonésie, Colombie, et Indonésie, Colombie, et</i>										
MALAYSIE (MALAYSIA)	1937	4 244	1	1	—	1	1	—	2	—
BRITISH MALAY (MALAYSIA)	1938	5 174	5	2	—	—	2	—	2	—
<i>Philippines — Philippines</i>										
PHILIPPINES	1937	13 15	5	3	—	—	5	—	3	—
1938	13 15	5	3	—	—	5	—	3	—	—
<i>Indonésie — French</i>										
INDONÉSIE (FRANÇAISE)	1937	23 15	—	2	—	—	—	—	2	—
1938	23 15	—	1	—	—	—	—	—	1	—
<i>Corée — Japon</i>										
CORÉE	1937	23 38	—	100	—	—	—	1	107	—
1938	23 38	—	62	—	—	—	—	—	62	—
<i>Formose — Japon</i>										
FORMOSE	1937	5 36	21	7	—	14	21	—	21	—
1938	5 36	20	4	—	25	30	—	—	24	—
<i>Korée — Japon</i>										
KORÉE	1937	1 7	1	20	—	1	1	2	20	—
1938	1 75	1	25	—	1	1	1	1	30	—
Afrique — Africa										
UNION DES AFRICAINE	1937	6 707	11	4	—	10	11	—	14	—
1938	6 889	10	6	N.R.	7	N.R.	—	14	N.	—
<i>Indonésie, Colombie, et Indonésie, Colombie, et Indonésie, Colombie, et</i>										
ALGERIE	1937	7 31	1	—	—	1	4	—	1	—
1938	7 4	5	—	—	—	2	5	—	2	—
<i>Mariage — Français</i>										
MAROC (FRANÇAIS)	1937	6 30	1	—	—	1	1	—	1	—
1938	6 43	—	1	—	—	—	—	—	1	—
<i>Tunisie — Français</i>										
TUNISIE	1937	2 03	—	—	—	1	—	—	1	—
1938	2 07	1	—	—	—	1	1	—	1	—
Océanie — Oceania										
AUSTRALIE	1937	6 807	22	20	—	21	22	—	47	—
1938	6 807	25	23	—	15	25	—	41	—	—
<i>Nouvelle-Zélande — Nouvelle-Zélande</i>										
NOUVELLE-ZÉLANDE	1937	1 585	3	3	—	1	3	—	4	—
1938	1 602	5	3	—	1	3	—	4	—	—
TOTAUX	1937			775	851	181				
1938				686	611	151				

S. — Benzoylmorphine.

Asie — Asia									
<i>Dependencies, Colonies, etc.:</i>									
<i>Dependencies, Colonies, etc.:</i>									
<i>Islands: — Japanese:</i>									
KORAN-TOUNG	1937	1.7	—	—	—	—	—	—	—
KWANTUNG	1938	1.75	—	—	—	—	—	—	—

(c) 17 kg. ont été détruits.

(b) 2 kg. ont été détruits.

9. — Cocaine brute. — 9. — Crude Cocaine.

Aux termes de l'article 1 b) de la Convention de 1923, les États parties ont tenu séparément, tandis que la Convention de 1937 traite les deux aspects de la production de la cocaine brute, comme tombant sous la définition de la cocaïne brute, les États parties ont considéré indispensable d'avoir un tableau résumant la teneur en cocaïne brute de la cocaine brute, et ont donné que figure dans le tableau ci-dessous.

En 1937, les États parties à la Convention de 1923 ont tenu séparément, tandis que la Convention de 1937 traite les deux aspects de la production de la cocaine brute, comme tombant sous la définition de la cocaïne brute, les États parties ont considéré indispensable d'avoir un tableau résumant la teneur en cocaïne brute de la cocaine brute, et ont donné que figure dans le tableau ci-dessous.

Pays	Année									
	1	2	3	4	5	6	7	8	9	10
Europe	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
ALLEMAGNE (a)	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
BELGIQUE	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
ESPAGNE	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
FRANCE	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
PAYS-BAS	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Pologne	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Suisse	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Tchécoslovaquie	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
U.R.S.S.	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
YUGOSLAVIE	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946

10. — Cocaïne.

Pays	Année	Population en millions	A	1	2	3	B	4	I	5
			Total des évaluations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'importation est permise aux termes de l'Art. 12 de la Convention de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat
	Year	Population in millions	Total of estimates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quantity imported under Government purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Convention	Quantity confiscated which has been released or added to stocks	Total of columns 2 to 4	Quantity imported or bought in the country for Government purposes
Europe										
ALBANIE	1937	1.1	1	N.R.	N.R.	—	—	N.R.	N.R.	N.R.
	1938	1.12	1	N.R.	N.R.	1	—	N.R.	N.R.	N.R.
ALLEMAGNE (a)	1937	67,587	270	510	595	1	86	—	1 106	4
	1938	74 826	125	665	236	0	325	—	910	—
AUTRICHE (1)	1937	0.76	57	27	—	20	55	—	47	—
BELGIQUE	1937	8,331	245	65	155	—	184	—	220	7
	1938	8 391	193	54	176	—	101	—	230	9
BULGARIE	1937	6,238	76	0	—	11	76	—	17	5
	1938	6 310	78	4	—	14	78	—	18	—
DANEMARK	1937	3 702	27	30	—	20	32	—	50	—
	1938	3 79	30	20	—	38	53	—	67	—
ESPAGNE	1937	25.05	120	N.R.	—	21	120	—	—	18
	1938	25.—	125	38	N.R.	(c) —	—	N.R.	—	N.R.
ESTONIE	1937	1.13	6	2	—	6	6	—	8	—
	1938	1.131	6	1	—	7	6	—	8	—
FINLANDE	1937	3,693	16	8	—	11	16	—	10	1
	1938	3,63	16	8	—	10	16	—	18	—
FRANCE	1937	41.91	409	214	333	—	99	1	548	—
	1938	41.97	455	215	324	—	145	—	539	—
GRÈCE	1937	6,933	20	9	—	16	20	—	25	—
	1938	7 913	18	15	—	18	18	—	33	—
HONGRIE	1937	8,080	35	0	—	18	35	—	27	—
	1938	0,035	22	13	—	25	22	—	38	1
IRLANDE	1937	2,054	9	5	—	9	9	—	14	—
	1938	2,041	10	2	—	3	10	—	5	—
ISLANDE	1937	0 117	5	—	—	2	3	—	2	—
	1938	0 118	3	2	—	—	3	—	2	—
ITALIE	1937	42 677	256	85	N.R.	(d) 77	—	N.R.	—	N.R.
	1938	43,029	159	N.R.	N.R.	N.R.	—	N.R.	—	N.R.
LETTONIE	1937	1 905	12	13	—	3	12	—	16	—
	1938	1,071	8	9	—	6	8	—	15	—
LITHUANIE	1937	2,527	6	2	—	6	6	—	8	—
	1938	2,55	8	4	—	2	8	—	6	—
LUXEMBOURG	1937	0,298	2	—	—	—	2	—	—	—
	1938	0,301	5	—	—	—	5	—	—	—
NORVÈGE	1937	2,804	19	3	—	11	19	—	14	—
	1938	2,906	18	6	—	16	18	—	22	4

(a) En 1938, y compris l'Autriche.

(b) En 1938, les données relatives à l'Autriche sont comprises dans celles de l'Allemagne; le seul chiffre relatif à l'Autriche qu'ait reçu le Comité est celui — fourni par les autorités allemandes — de l'importation au cours du deuxième trimestre: 5 kg.

(c) Un relevé trimestriel manque.

(d) Deux relevés trimestriels manquent.

10. — Cocaïne (suite).

Pays	Année	Popula- tion en millions	A	1	2	3	D	4	I	5
			Total des éva- luations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat
	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Go- vernment purposes
Europe (suite)										
PAYS-BAS	1937	6.557	66	114	89	1	20	2	206	—
	1938	8.64	47	138	60	4	27	—	202	—
POLOGNE	1937	34.221	50	16	42	—	8	—	58	10
	1938	34.515	50	18	N.R.	—	—	N.R.	—	N.R.
PORTUGAL	1937	7.301	53	13	—	15	33	—	28	—
	1938	7.38	33	13	—	12	33	—	25	—
ROUMANIE	1937	19.423	40	7	—	28	40	—	35	—
	1938	19.646	82	13	—	45	82	—	58	—
ROYAUME-UNI	1937	47.332	411	221	367	—	188	—	588	3
	1938	47.532	451	228	376	1	142	—	605	3
SUÈDE	1937	6.267	47	12	—	35	47	—	47	—
	1938	6.285	88	17	—	34	89	—	51	—
SUISSE	1937	4.174	30	101	129	3	35	—	323	—
	1938	4.183	271	166	83	20	284	—	269	—
TCHÉCOSLOVAQUIE	1937	15.213	223	74	137	—	86	—	211	—
	1938	15.27	270	110	N.R.	(b) —	—	N.R.	—	N.R.
TURQUIE	1937	16.49	42	8	—	21	42	—	29	N.R.
	1938	16.8	30	18	—	8	30	—	26	N.R.
U. R. S. S.	1937	175.5	559	89	459	—	100	—	548	—
	1938	169.—	453	46	495	—	48	—	451	—
YUGOSLAVIE	1937	15.174	27	6	14	—	13	—	20	—
	1938	15.4	16	3	17	—	—	—	20	—
<i>Dépendances, Colonies, etc. :</i>										
<i>britanniques :</i>										
MALTE	1937	0.262	2	—	—	1	2	—	1	—
	1938	0.265	3	—	—	—	3	—	—	—
Amérique du Nord										
CANADA	1937	11.08	54	28	—	67	54	—	95	—
	1938	11.165	76	47	—	33	76	—	80	—
ÉTATS-UNIS D'AMÉRIQUE	1937	128.84	845	605	813	—	47	—	1 418	—
	1938	129.818	917	573	785	—	144	—	1 358	—
TERRE-NEUVE	1937	0.288	1	—	—	1	1	—	1	—
	1938	0.289	1	—	—	—	1	—	—	—
Mexique et Amérique Centrale										
MEXIQUE	1937	19.003	25	13	—	11	25	—	24	—
	1938	19.32	19	22	—	—	19	—	22	—

(a) La réponse des autorités roumaines à l'enquête du Comité laisse subsister la divergence entre ce chiffre et celui de la colonne III.

(b) Un relevé trimestriel manque.

10. — Cocaïne (suite).

Pays	Année	Popula- tion en millions	A Total des éva- luations	1 Stocks à la fin de l'année précédente	2 Quantité fabriquée	3 Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	B Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	4 Quantité confisquée qui a été remise en circulation ou versée aux stocks	I Total des colonnes 1 à 4	5 Quantité importée ou achetée dans le pays pour les besoins de l'Etat
	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Go- vernment purposes
Asie (suite)			Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
IRAK	1937	3.6	1	—	—	—	1	—	—	—
	1938	3.67	1	1	—	—	1	—	1	—
IRAN	1937	15.—	10	N.R.	N.R.	6	—	N.R.	—	N.R.
	1938	15.—	16	N.R.	N.R.	7	—	N.R.	—	N.R.
JAPON	1937	70.5	948	405	896	—	55	—	1 301	3
	1938	71.5	900	397	900	—	14	—	1 297	3
THAÏLANDE	1937	14.4	1	2	—	1	1	—	3	—
	1938	14.65	1	2	—	—	1	—	2	—
Dépendances, Colonies, etc. :										
britanniques :										
BIRMANIE (a)	1937	15.6	1	—	—	1	1	—	—	—
	1938	15.797	2	110	—	—	2	10	120	—
CEYLAN	1937	5.758	4	—	—	2	4	—	2	—
	1938	5.86.	3	1	—	—	3	—	1	—
HONG-KONG	1937	1.—	1	—	—	1	1	—	1	—
	1938	1.01	1	—	—	1	1	—	1	—
MALAISIE BRITANNIQUE ET BRUNÉI	1937	4.844	2	1	—	—	2	—	1	—
	1938	5.174	4	3	—	1	4	1	5	—
des Etats-Unis :										
PHILIPPINES	1937	13.35	27	5	—	7	27	—	12	2
	1938	13.6	15	13	—	4	15	—	17	—
françaises :										
INDOCHINE FRANÇAISE	1937	23.15	4	1	—	4	4	—	5	—
	1938	23.3	10	1	—	5	10	—	6	—
japonaises :										
CORÉE	1937	23.38	29	13	6	16	23	—	35	—
	1938	23.64	24	15	7	5	17	—	27	—
FORMOSE	1937	5.31	45	34	90	—	11	—	124	—
	1938	5.446	53	37	85	—	—	—	122	—
KOUAN-TOUNG	1937	1.7	45	5	—	40	45	—	45	3
	1938	1.75	40	5	—	25	40	4	34	7
néerlandaises :										
INDES NÉERLANDAISES	1937	66.4	10	4	—	4	10	—	8	1
	1938	67.4	12	2	—	11	12	—	13	8
portugaises :										
MACAO	1937	0.17	—	1	—	—	—	—	1	—
	1938	0.17	—	1	—	—	—	—	1	—
Territoires sous mandat :										
britannique :										
PALESTINE	1937	1.36	10	—	—	6	10	—	6	—
	1938	1.4	10	—	—	2	10	—	2	—
français :										
SYRIE ET LIBAN	1937	3.5	12	—	—	3	12	—	3	—
	1938	3.6	17	2	—	4	17	—	6	—

(a) A partir du 1^{er} avril 1937, la Birmanie ne fait plus partie de l'Inde.

10. — Cocaïne (*fin*).

Pays	Année	Popula- tion en millions	A	1	2	3	B	4	I	5
			Total des éva- luations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat
	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported, (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Con- vention	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Go- vernment purposes
Afrique			Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
EGYPTE	1937	15.86	3	1	—	3	3	—	4	—
	1938	16.03	3	1	—	2	3	—	3	—
UNION SUD-AFRICAINE	1937	9.707	25	9	—	17	25	—	26	—
	1938	9.889	31	8	N.R.	16	—	N.R.	—	N.R.
<i>Dépendances, Colonies, etc. : britanniques :</i>										
CÔTE DE L'OR ET TOGO SOUS MANDAT BRITANNIQUE	1937	3.65	—	3	—	—	—	—	3	—
	1938	3.747	1	—	—	—	1	—	—	—
<i>françaises :</i>										
AFRIQUE-OCCIDENTALE FRANÇAISE	1937	14.7	2	3	—	—	2	—	3	—
	1938	14.75	3	1	—	2	3	—	3	—
ALGÉRIE	1937	7.31	15	—	—	9	15	—	9	—
	1938	7.4	15	—	—	10	15	—	10	—
MADAGASCAR	1937	3.8	2	—	—	—	2	—	—	—
	1938	3.8	2	—	—	—	2	—	—	—
MAROC (ZONE FRANÇAISE)	1937	6.36	9	6	—	9	9	—	15	—
	1938	6.43	9	11	—	2	9	—	13	—
TUNISIE	1937	2.63	4	1	—	3	4	—	4	—
	1938	2.67	6	2	—	4	6	—	6	—
<i>portugaises :</i>										
ANGOLA	1937	3.25	2	1	—	1	2	—	2	—
	1938	3.25	5	2	—	4	5	—	6	—
MOZAMBIQUE	1937	4.25	2	1	—	—	2	—	1	—
	1938	4.28	2	1	—	—	2	—	1	—
<i>Territoires sous mandat : français :</i>										
CAMEROUN	1937	2.39	1	—	—	—	1	—	—	—
	1938	2.4	2	1	—	—	2	—	1	—
Océanie										
AUSTRALIE	1937	6.807	98	44	—	89	98	—	133	—
	1938	6.867	91	49	—	87	91	—	136	—
NOUVELLE-ZÉLANDE	1937	1.585	12	7	—	5	12	—	12	—
	1938	1.602	12	4	—	5	12	—	9	—
TOTAUX	1937			3 122	4 142	843				
	1938			3 230	3 490	676				

11. — Dihydrooxycodéine, Dihydrocodéine, Dihydromorphine, Acétyldihydrocodéine, N-Oxymorphine et Benzylmorphine.

Les chiffres qui figurent dans ce tableau sont la somme de données relatives à six « drogues » distinctes. En comparant ces statistiques et évaluations globales, il ne faut pas perdre de vue certains faits: l'excédent d'importation d'une drogue, par exemple, peut être contrebalancé dans le cas où l'importation d'une autre drogue est inférieure à l'évaluation.

Pays	Année	Popula- tion en millions	A	1	2	3	B	4	1	5
			Total des éva- luations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'Art. 12 de la Conven- tion de 1931	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays pour les besoins de l'Etat
	Year	Population in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)	The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Conven- tion	Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought in the country for Gov- ernment purposes
Europe										
ALLEMAGNE (a)	1937	67.587	223	265	266	—	67	—	531	9
	1938	74.826	250	258	277	—	82	—	535	—
AUTRICHE (a)	1937	6.76	36	10	—	8	36	—	18	—
	1938	8.331	21	1	13	9	17	—	23	—
BELGIQUE	1937	8.361	18	5	15	7	10	—	27	—
	1938	8.310	11	—	—	2	11	—	2	—
BULGARIE	1937	6.310	9	—	—	3	9	—	3	—
	1938	3.762	7	2	—	5	7	—	7	—
DANEMARK	1937	3.79	9	4	—	7	9	—	11	—
	1938	25.05	7	N.R.	—	6	—	—	—	8
ESPAGNE	1937	25.—	6	3	N.R.	(b) 4	7	N.R.	—	N.R.
	1938	1.13	1	—	—	—	1	—	—	—
ESTONIE	1937	1.131	1	—	—	1	1	—	1	—
	1938	3.603	2	1	—	—	2	—	1	—
FINLANDE	1937	3.63	3	1	—	2	3	—	3	—
	1938	41.91	23	5	1	13	24	—	19	—
FRANCE	1937	41.97	26	7	9	5	17	—	21	—
	1938	8.989	6	4	—	3	6	—	7	—
HONGRIE	1937	9.035	4	4	—	—	4	—	4	—
	1938	42.677	6	5	N.R.	(c) 3	—	N.R.	—	N.R.
ITALIE	1937	43.029	4	N.R.	N.R.	N.R.	—	N.R.	—	N.R.
	1938	1.965	1	3	—	—	1	—	3	—
LETTONIE	1937	1.971	3	2	—	2	3	—	4	—
	1938	2.527	5	—	—	—	5	—	—	—
LITHUANIE	1937	2.55	4	—	—	1	4	—	1	—
	1938	2.894	2	—	—	2	2	—	2	—
NORVÈGE	1937	2.906	1	1	—	1	1	—	2	—
	1938	8.557	16	6	1	2	15	—	9	—
PAYS-BAS	1937	8.64	18	5	2	4	16	—	11	—
	1938	34.221	20	—	—	1	20	—	1	—
POLOGNE	1937	34.515	20	—	N.R.	2	—	N.R.	—	N.R.
	1938	7.301	4	—	—	1	4	—	1	—
PORTUGAL	1937	7.38	5	—	—	1	5	—	1	—
	1938	19.423	11	3	—	1	11	—	4	—
ROUMANIE	1937	19.646	19	3	—	1	19	—	4	—
	1938	6.267	12	2	1	6	11	—	9	—
SUÈDE	1937	6.285	13	5	3	4	10	—	12	—
	1938									

(a) En 1938, les données relatives à l'Autriche sont comprises dans celles de l'Allemagne.

(b) Un relevé trimestriel manque.

(c) Deux relevés trimestriels manquent.

11. — Dihydrooxycodéine, Dihydrocodéine, Dihydromorphine, Acétyldihydrocodéine, N-Oxymorphine et Benzylmorphine (*fin*).

Les chiffres qui figurent dans ce tableau sont la somme de données relatives à six « drogues » distinctes. En comparant ces statistiques et évaluations globales, il ne faut pas perdre de vue certains faits: l'excédent d'importation d'une drogue, par exemple, peut être contrebalancé dans le cas où l'importation d'une autre drogue est inférieure à l'évaluation.

Pays	Année	Popula- tion en millions	A	1	2	3	B	4	I	5
			Total des éva- luations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'im- portation est per- mise aux termes de l'art. 12 de la Conven- tion de 1931 The maximum quantity which is permitted to be imported under Art. 12 of the 1931 Conven- tion	Quantité confisquée qui a été remise en circulation ou versée aux stocks	Total des colonnes 1 à 4	Quantité importée ou achetée dans le pays por- tant le besoin de l'Etat
	Year	Popula- tion in millions	Total of esti- mates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quan- tity im- ported for Govern- ment purposes)		Quantity confiscated which has been released or added to stocks	Total of columns 1 to 4	Quantity imported or bought for the Government purpose
Europe (<i>fin</i>).										
SUISSE	1937	4.174	—	41	—	2	—	—	43	—
	1938	4.183	20	29	18	1	6	—	48	—
TCHÉCOSLOVAQUIE	1937	15.213	26	28	1	12	25	—	41	—
	1938	15.27	27	20	N.R.	(a) 7	—	N.R.	—	N.R.
YOUgoslavie	1937	15.171	15	2	—	3	15	—	5	—
	1938	15.4	11	3	—	4	11	—	7	—
Amérique du Nord										
ETATS-UNIS D'AMÉRIQUE	1937	128.84	54	37	38	—	16	—	75	—
	1938	129.818	61	38	25	—	36	—	63	—
Amérique Centrale										
CUBA	1937	4.37	5	—	—	1	5	—	—	N.R.
	1938	4.2	5	1	—	—	5	—	1	—
Amérique du Sud										
ARGENTINE	1937	12.562	5	N.R.	—	7	5	—	—	—
	1938	12.762	8	5	—	6	8	N.R.	—	N.R.
Asie										
CHINE	1937	450.—	5	N.R.	N.R.	—	—	—	—	N.R.
	1938	450.—	5	N.R.	—	(a) —	—	—	—	N.R.
INDE (b)	1937	358.6	8	—	—	1	8	—	1	—
	1938	362.—	4	—	—	2	4	—	2	—
JAPON	1937	70.5	72	18	70	—	8	—	88	—
	1938	71.5	70	21	26	—	54	—	47	—
<i>Dépendances, colonies, etc :</i>										
<i>japonaises :</i>										
CORÉE	1937	23.38	32	1	20	—	12	—	21	—
	1938	23.64	30	—	20	—	10	—	20	—
FORMOSE	1937	5.31	2	—	—	1	2	—	1	—
	1938	5.446	4	—	—	2	4	—	2	—
<i>néerlandaises :</i>										
INDES NÉERLANDAISES	1937	66.4	1	—	—	1	1	—	1	—
	1938	67.4	3	—	—	—	3	—	—	—
TOTAUX	1937			434	411	90				
	1938			415	395	67				

(a) Un relevé trimestriel manque.

(b) Les données concernant les stocks, la fabrication, les confiscations et les achats pour les besoins de l'Etat ne se réfèrent qu'à l'Inde britannique.

Pays	Année	Population en millions	A	1	2	3	B	4	C	5	D	6	7	E	
			Total des évaluations	Stocks à la fin de l'année précédente	Quantité fabriquée	Quantité importée (y compris la quantité importée pour les besoins de l'Etat)	Quantité maximum dont l'importation est permise aux termes de l'art. 12 de la Convention de 1931	Quantité confiscée qui a été remise en circulation ou versée aux stocks	Consommation calculée	Par million d'habitants	Evaluation de la quantité de la drogue nécessaire pour être utilisée comme telle	Quantité utilisée pour la transformation en "drogues" du Groupe I de l'art. 1 de la Convention de 1931	Quantité exportée	Stocks à la fin de l'année	Evaluation des stocks que l'on désirait maintenir
	Year	Population in millions	Total of estimates	Stocks held at the end of previous year	Quantity manufactured	Quantity imported (including the quantity imported for Government purposes)	Quantity which is permitted to be imported under Art. 12 of the 1931 Convention	Quantity confiscated which has been released or added to stocks	Calculated consumption	Per million inhabitants	Estimate of the quantity of the drug necessary for use as such	Quantity used for conversion into "Drugs" in Group I, Art. 1, of the 1931 Convention	Quantity exported	Stocks held at the end of the year	Estimate of the amount of stocks which it was desired to maintain
Africa (continued)															
Dépendances, Colonies, etc. : britanniques :															
CÔTE DE L'OR ET TOGO SOUS MANDAT BRITANNIQUE	1937 1938	3.65 3.747	— —	— 1	— —	— —	— —	— —	— 1	0.27	— —	— —	— —	1 —	— —
MAURICE	1937 1938	0.411 0.413	1 1	— —	— —	— 1	1 1	— —	— 1	2.42	1 1	— —	— —	— —	1 —
françaises :															
AFRIQUE-EQUATORIALE FRANÇAISE	1937 1938	3.5 3.5	2 2	— —	— —	— —	2 2	— —	— —	— —	2 2	— —	— —	— 1	— —
AFRIQUE-OCIDENTALE FRANÇAISE	1937 1938	14.7 14.75	8 10	13 12	— —	1 6	8 10	— —	2 12	0.14 0.81	8 10	— —	— —	12 6	— 3
ALGÉRIE	1937 1938	7.31 7.4	25 45	— —	— —	17 30	25 45	— —	17	2.32	25 45	— —	— —	— N.R.	— —
MADAGASCAR	1937 1938	3.8 3.8	20 15	25 17	— —	11 4	20 15	— —	19 12	5 3.16	20 15	— —	— —	17 9	— —
MAROC (Zone française)	1937 1938	6.36 6.43	21 24	3 43	— —	23 15	21 24	— —	(a) 37	5.75	21 12	— —	— —	43 21	— 15
RÉUNION	1937 1938	0.21 0.21	2 2	— —	— —	1 2	2 2	— —	1 2	4.76 9.52	2 2	— —	— —	— —	— —

[illegible]

Diacétylmorphine.
(DIAMORPHINE, HÉROÏNE).

Pays	1	2	3	4	5	A	6
	Quantité utilisée comme telle pour la consommation nationale (a)	Quantité utilisée aux fins de transformation	Quantité utilisée pour satisfaire les besoins de l'exportation au niveau supérieur	Quantité requise pour satisfaire les besoins de l'exportation au niveau inférieur	Quantité exportée	Total des colonies 1 à 5	Quantité importée
	dans les limites des évaluations						
	Quantity used as such for domestic consumption (a)	Quantity used for the purpose of conversion	Quantity used to satisfy the requirements of the export at the higher level	Quantity required to satisfy the requirements of the export at the lower level	Quantity exported	Total of colonies 1 to 5	Quantity imported
	within the limits of the estimates						
	Kg	Kg	Kg	Kg	Kg	Kg	Kg
ALLEMAGNE	1	— *	—	—	31	32	—
BELGIQUE	10	—	3	—	17	30	—
FINLANDE	28	—	2 *	—	—	30	30
FRANCE	70	—	—	—	4	74	—
PAYS-BAS	—	—	—	—	5	5	—
ROYAUME-UNI	42	—	3	—	10	60	—
SUÈDE	13	—	3	—	—	16	—
SUISSE	2	—	3	—	30	41	—
U.R.S.S.	137	—	—	—	—	137	—
YOUGO-SLAVIE	—	—	— *	—	4	4	—
JAPON	180 *	—	—	—	20	200	—
TOTAUX							

Cocaïne.

ALLEMAGNE	76	—	—	—	134	510	0
BELGIQUE	73	—	15	— *	87	175	—
FRANCE	270	—	9	—	37	345	—
PAYS-BAS	22	—	2	—	40	64	4
ROYAUME-UNI	247	—	60	—	67	383	1
SUISSE	30 *	—	—	—	96	126	20
U.R.S.S.	366	—	30	—	—	405	—
YOUGO-SLAVIE	11	—	— *	—	—	11	—
ÉTATS-UNIS D'AMÉRIQUE	704	—	8	—	12	784	—
ARGENTINE	N.R.	—	N.R.	N.R.	2	—	84
INDE	40	—	— *	— *	—	40	22
JAPON	805	—	—	— *	14	909	—
CORÉE	21	—	—	—	—	21	5
FORMOSE	40	—	13 *	—	30	83	—
TOTAUX							

* Limite de l'évaluation.

(a) Cette quantité comprend aussi la quantité utilisée pour la fabrication des préparations dont l'exportation ne nécessite pas d'autorisation, même si ces préparations sont destinées à être exportées.

(b) Y compris 3 kg. achetés pour la consommation des Services de l'Etat.

Thébaïne.

Pays	1	2	3	4	5	A	6
	Quantité utilisée comme telle pour la consommation intérieure (a)	Quantité utilisée aux fins de transformation	Quantité utilisée pour maintenir les stocks de réserve au niveau spécifié	Quantité acquise pour maintenir les stocks d'Etat au niveau désiré	Quantité exportée	Total des colonnes 1 à 5	Quantité importée
	Quantity used as such for domestic consumption (a)	Quantity used for the purpose of conversion	Quantity used to maintain the reserve stocks at the specified level	Quantity acquired to maintain the Government stocks at the desired level	Quantity exported	Total of columns 1 to 5	Quantity imported
	dans les limites	des limites	des évaluations				
	within the limits		of the estimates				
	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
ALLEMAGNE	—	260 *	—	—	24	284	—
BELGIQUE	—	32	—	—	—	32	—
FRANCE	—	20 *	— *	—	20	40	—
PAYS-BAS	—	10 *	3	—	—	13	—
ROYAUME-UNI	—	—	—	—	99	99	—
YOUgoslavie	—	22	—	—	3	25	40
ETATS-UNIS D'AMÉRIQUE . .	10	— *	—	—	—	10	—
JAPON	—	85	—	—	—	85	—
TOTAUX							

Ester méthylique de l'ecgonine.

ALLEMAGNE	—	50 *	—	—	—	50	—
---------------------	---	------	---	---	---	----	---

Dihydrooxycodéinone, Dihydrocodéinone, Dihydromorphinone, Acétylodihydrocodéinone et N-Oxymorphine.

Dans les pays suivants, la fabrication de l'une ou l'autre de ces cinq drogues a dépassé la quantité dont la fabrication est autorisée d'après les articles 6 et 7 de la Convention de 1931.

Pays	Excédent de fabrication en 1938, s'il n'est pas tenu compte de l'excédent fabriqué en 1937.
	Kg.
Allemagne	8
Belgique	1
France	1
Suisse	4

* Limite de l'évaluation.

(a) Cette quantité comprend aussi la quantité utilisée pour la fabrication des préparations dont l'exportation ne nécessite d'autorisation, même si ces préparations sont destinées à être exportées.

Optim brut. — Raw Optim.

Optim brut.

Payas exportation

Exporting countries

Total

Autres
pays
(a)
autres
countries

Canada

Iran

Inde

Indonésie

Yugoslavie

U.R.S.S.

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Payas importation
Importing countries

Allemagne
Germany

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

Indonésie

ALLEMAGNE
GERMANY

INDONÉSIE
INDONESIA

INDONÉSIE (b)
INDONESIA (b)

INDONÉSIE
INDONESIA

INDONÉSIE (c)
INDONESIA (c)

INDONÉSIE (d)
INDONESIA (d)

INDONÉSIE (e)
INDONESIA (e)

INDONÉSIE (f)
INDONESIA (f)

INDONÉSIE (g)
INDONESIA (g)

INDONÉSIE (h)
INDONESIA (h)

INDONÉSIE (i)
INDONESIA (i)

INDONÉSIE (j)
INDONESIA (j)

INDONÉSIE (k)
INDONESIA (k)

INDONÉSIE (l)
INDONESIA (l)

INDONÉSIE (m)
INDONESIA (m)

INDONÉSIE (n)
INDONESIA (n)

INDONÉSIE (o)
INDONESIA (o)

INDONÉSIE (p)
INDONESIA (p)

INDONÉSIE (q)
INDONESIA (q)

INDONÉSIE (r)
INDONESIA (r)

INDONÉSIE (s)
INDONESIA (s)

Feuilles de coca. — Coca Leaves.

Pays Importateurs	Pays Exportateurs — Exporting Countries						Total	Importing Countries
	Allemagne Germany	Pays-Bas Netherlands	Bolivie Bolivia	Pérou (a) Peru	Formose Formosa	Indes néerlandaises Netherlands Indies	Autres pays (b) Other Countries	
Allemagne	Kg. 74 486 74 486	Kg. 74 486 74 486	Kg.	Kg. 12 444 11 457	Kg.	Kg.	Kg. 86 930 86 942	Germany
France	3 055 3 055	49 680 50 848		7 727 5 492			60 462 59 395	France
Pays-Bas	1					15 001* 1*	15 002 1	Netherlands
Royaume-Uni	554 557	43 671 43 685				25 385* 29 384*	69 610 73 626	United Kingdom
Turquie	500*					1 000*	1 500	Turkey
Etats-Unis d'Amérique		22 600* 11 327*		174 582 88 164 (c)		11 330 11 339	208 581 110 830	United States of America
Argentine (d)	6 100 (c)		351 578 388 174	18 952 2 996			370 642 307 640	Argentine (d)
Pérou (a)			1 958				1 958	Peru (a)
Japon					45 301 45 260		45 301 45 260	Japan
Autres pays	1 829 2 125	173 177					740 768	Other countries
TOTAL	5 939 11 837	190 670 180 622	351 578 390 132	213 705 108 114	45 301 45 260	52 725 40 724	852 1 138	TOTAL

* Divergence attribuable au fait que des quantités exportées à la fin d'une année n'arrivent à destination qu'au début de l'année suivante.

(a) Un relevé trimestriel manque.

(b) France, Royaume-Uni, Portugal et Suisse.

(c) Cette divergence fait encore l'objet d'une enquête du Comité.

(d) Il n'existe pas de contrôle de l'importation des feuilles de coca en Argentine.

* Discrepancy assumed to be due to the fact that quantities exported at the end of one year only arrive at their destination at the beginning of the following year.

(a) Return for one quarter missing.

(b) France, the United Kingdom, Portugal and Switzerland.

(c) This discrepancy is still under investigation by the Board.

(d) There is no legislative control of the imports of coca leaves in the Argentine.

Diacétylmorphine (diamorphine, héroïne). — Diacétylmorphine (Diamorphine, Heroin).

PAYS IMPORTATEURS Importing Countries	PAYS EXPORTATEURS Exporting Countries								Total
	Allemagne Germany	Belgique Belgium	Danemark Denmark	France	Pays-Bas Nether- lands	Royaume- Uni United Kingdom	Suisse Switzer- land	Yugo- slavie Yugo- slavia	Japon Japan
Danemark Denmark	Kg. 2 1	Kg.	Kg.	Kg.	Kg.	Kg.	Kg. 5 3	Kg. 3 3	Kg. 10 12
Finlande Finland		8 8	6 6				25 25		39 39
Norvège Norway	1 1								1 1
Portugal	1 1	2*					1 1		3 5
Roumanie Roumania	5* 7*							1*	5 8
Canada	4 4	4 4				16* 14*			24 22
Argentine	6 6	7 7			1* 2*		3 3		17 12
Pérou Peru	1 1								1 1
Colombie Colombia	1 1								1 1
Uruguay				1*					1

[illegible]

E. STATISTIQUES ANNUELLES DES CONFISCATIONS (1938).

E. ANNUAL STATISTICS OF CONFISCATIONS (1938).

Pays ou territoire d'origine des opium confiscés	Quantités confisquées				Pays ou territoire d'origine des opium confiscés
	à l'exportation		dans les pays de transit		
	Quantité (kg)	Quantité (kg)	Quantité (kg)	Quantité (kg)	
	Quantité (kg)	Quantité (kg)	Quantité (kg)	Quantité (kg)	
OPIUM BRUT — RAW OPIUM					
Indochine française	1 431				French Indo-China
Egypte	1 079		1 040		Egypt
Hong-Kong	1 026		1 694	405	Hong-Kong
Cerde	70	848	451		Korea
U.R.S.S.	880	3			U.S.S.R.
Birmanie	804		154		Burma
Syrie et Liban	642	50	120	572	Syria and Lebanon
Chine	305	251	4	353	China
Kouan-Toung	558	94			Kwantung
Philippines	468		306	62	Philippines
Turquie		410	2	410	Turkey
Allemagne	306				Germany
Thaïlande	222				Thailand
Palestine	217		217		Palestine
Inde	110	62	6	293	India
Ceylon	172				Ceylon
France	103			100	France
Indes néerlandaises	90				Netherlands Indies
Etats-Unis d'Amérique	70		1	141	United States of America
Pays-Bas	65				Netherlands
Malaisie britannique	64				Brit. Malaya and Brunei
Irak	40				Iraq
Madagascar	20		20		Madagascar
Formose	10		3		Formosa
Fiji	13		13		Fiji
Reunion	8		8		Reunion
Cyprus	5		5		Cyprus
Etats français dans l'Inde	4				French India
Cuba	2			5	Cuba
Curacao	2		2		Curacao
Roumanie	1				Roumania
Soudan	1			1	Sudan
Mozambique	1		1		Mozambique
Etats français en Océanie			5		French Oceania
Yucatan				690	Yucatan
Bulgarie				30	Bulgaria
Belgique				7	Belgium
Mexique				5	Mexico
Total	8 057	1 797	4 170	3 339	Total
	10 754				

OPIUM MÉDICINAL ET OPIUM SOUS FORME DE PRÉPARATIONS MEDICINAL OPIUM AND OPIUM IN THE FORM OF PREPARATIONS

Chine	10	10	21	China
Nouveau-Hébrides	2		2	New Hebrides
Mexique			21	Mexico
Total	12	10	44	Total

FEUILLES DE COCA — COCA LEAVES

E. STATISTIQUES ANNUELLES DES CONFISCATIONS (1938) (fin).

E. ANNUAL STATISTICS OF CONFISCATIONS (1938) (concluded).

Pays (par ordre d'importance des confiscations)	Quantités confisquées				Countries (by order of importance of confiscations)
	à la suite:		détruites (a)	qui n'ont pas encore reçu d'affectation (a)	
	d'importations illicites	d'exportations illicites			
	Quantities confiscated				
	on account of:		destroyed (a)	not yet disposed of (a)	
	illicit imports	illicit exports			
	Kg.	Kg.	Kg.	Kg.	
DIACÉTYLMORPHINE — DIACETYLMORPHINE					
France	76			100	France
Chine	53		4	53	China
Etats-Unis d'Amérique . .	31		9	80	United States of America
Egypte	14		14	14	Egypt
Palestine	11		11		Palestine
Yougoslavie		10		12	Yugoslavia
Grèce	4		4		Greece
Allemagne	2				Germany
Tunisie	2		2		Tunis
Malaisie brit. et Brunéi. .	1		1		Brit. Malaya and Brunei
Kouan-Toung.	1		17		Kwantung
Indes néerlandaises . . .			3		Netherlands Indies
Turquie			1		Turkey
Bulgarie				8	Bulgaria
TOTAL	195	10	66	267	TOTAL
	PILULES-PILLS		PILULES-PILLS	PILULES-PILLS	
Macao	17 061		17 061	5 576	Macao
Hong-Kong			2 713 181		Hong-Kong

BENZOYLMORPHINE

	Kg.	Kg.	Kg.	Kg.	
Kouan-Toung			2		Kwantung

COCAÏNE — COCAINE

Kouan-Toung	4				Kwantung
France	3			34	France
Malaisie brit. et Brunéi . .	2				Brit. Malaya and Brunei
Cuba	1			3	Cuba
Chine		1		1	China
Etats-Unis d'Amérique . .			1		United States of America
Inde				12	India
TOTAL	10	1	1	50	TOTAL

CODÉINE — CODEINE

Kouan-Toung	5				Kwantung
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ETHYLMORPHINE

Kouan-Toung	4				Kwantung
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(a) Ces chiffres peuvent comprendre des quantités confisquées au cours des années antérieures. Les quantités qui ont été remises en circulation ou versées aux stocks figurent dans la colonne 4 des tableaux de la Partie B du présent document.

(a) These figures may include quantities confiscated during previous years. The quantities which were released or added to stocks are shown in column 4 of the tables in Part B of this document.

**FABRICATION ET TRANSFORMATION DE LA MORPHINE; FABRICATION DE LA
DIACÉTYLMORPHINE, LA COCAÏNE, LA CODÉINE ET L'ÉTHYLMORPHINE, DE 1934 A 1938 (56).
MANUFACTURE AND CONVERSION OF MORPHINE; MANUFACTURE OF DIACETYLMORPHINE,
COCAINE, CODEINE AND ETHYLMORPHINE, FROM 1934 TO 1938 (continued).**

Pays	Année	Morphine			Fabrication des Morphinés (57)				Country
		Fabrication totale	Quantité transformée	Quantité nettoyée	Diacétyl- morphine	Cocaïne	Codéine	Éthyl- morphine	
		Quantité totale	Quantité transformée	Quantité nettoyée					
		Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	
CHINA- SINGAPOUR	1934	432	432	112	—	132	232	11	CHINA- SINGAPOUR
	1935	232	432	6	—	32	232	11	
	1936	232	232	112	—	132	232	11	
	1937	1 032	232	112	—	132	232	11	
URSS	1934	1 032	1 032	1 032	1 032	1 032	1 032	1 032	URSS
	1935	1 032	1 432	1 112	1 032	1 032	1 032	1 032	
	1936	1 032	1 112	1 032	1 032	1 032	1 032	1 032	
	1937	1 032	1 112	1 112	1 032	1 032	1 032	1 032	
YUGOSLAVIE	1934	32	32	32	—	—	32	32	YUGOSLAVIE
	1935	32	32	32	—	—	32	32	
	1936	32	32	32	—	—	32	32	
	1937	32	32	32	—	—	32	32	
ÉTATS-UNIS d'AMÉRIQUE	1934	1 032	1 032	1 032	—	1 032	1 032	1 032	UNITED STATES OF AMERICA
	1935	1 032	1 032	1 032	—	1 032	1 032	1 032	
	1936	1 032	1 032	1 032	—	1 032	1 032	1 032	
	1937	1 032	1 032	1 032	—	1 032	1 032	1 032	
Inde	1934	32	—	32	—	32	32	—	INDIA
	1935	32	—	32	—	—	32	—	
	1936	32	—	32	—	32	32	—	
	1937	32	—	32	—	32	32	—	
JAPON	1934	1 032	1 032	1 032	1 032	1 032	1 032	—	JAPAN
	1935	1 032	1 032	1 032	1 032	1 032	1 032	1 032	
	1936	1 032	1 032	1 032	1 032	1 032	1 032	1 032	
	1937	1 032	1 032	1 032	1 032	1 032	1 032	1 032	
CORÉE	1934	32	32	32	32	—	—	—	KOREA
	1935	—	32	32	—	—	—	—	
	1936	—	32	32	—	—	—	—	
	1937	—	32	32	—	—	—	—	
FORMOSE	1934	—	—	—	—	32	—	—	FORMOSA
	1935	—	—	—	—	32	—	—	
	1936	—	—	—	—	32	—	—	
	1937	—	—	—	—	32	—	—	
KOUANG-TONG	1934	32	—	32	—	—	—	—	KWANTUNG
	1935	32	—	32	—	—	—	—	
	1936	32	—	32	—	—	—	—	
	1937	32	—	32	—	—	—	—	
AUTRES PAYS (58)	1934	32	32	32	—	—	—	—	OTHER COUNTRIES
	1935	32	32	32	—	—	—	—	
	1936	32	32	32	—	—	—	—	
	1937	32	32	32	—	—	—	—	
TOTAL (59)	1934	10 032	10 032	10 032	10 032	10 032	10 032	10 032	TOTAL (59)
	1935	10 032	10 032	10 032	10 032	10 032	10 032	10 032	
	1936	10 032	10 032	10 032	10 032	10 032	10 032	10 032	
	1937	10 032	10 032	10 032	10 032	10 032	10 032	10 032	

(56) Belgique, Danemark, Finlande et Norvège.
(57) La source des données de morphine est la transformation et de morphine non transformée et
rapportée au chiffre de la consommation totale, sur une certaine partie de la quantité de morphine subie pour la
transformation en autres des produits.

(58) Belgique, Danemark, Finlande et Norvège.

His Majesty the King of Great Britain, Ireland and the British Dominions beyond the Seas, Emperor of India

For Great Britain and Northern Ireland and all parts of the British Empire which are not separate Members of the League of Nations

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For the Dominion of Canada

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The President of the National Government of the Republic of China

Dr. Hoo Chi-Tsai, Director of the Permanent Office of the Delegation to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council

The President of the Republic of Colombia.

M. Rafael GUIZADO, Secretary of the Permanent Delegation to the League of Nations

The President of the Republic of Cuba

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His Majesty the King of Denmark and Iceland.

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His Majesty the King of Egypt:

M. Edgar GORRA, Royal Adviser, " Directeur du contentieux de l'Etat ", Alexandria

The Official entrusted with the Supreme Power of the Republic of Ecuador.

M. Alejandro GASTELÚ CONCHA, Secretary of the Permanent Delegation to the League of Nations, Consul-General in Geneva

The President of the Spanish Republic.

M. Julio CASARES Y SÁNCHEZ, Head of Section at the Ministry of Foreign Affairs, Representative of Spain on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

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M. Johannes KÕDAR, Permanent Delegate *ad hoc* to the League of Nations.

The President of the French Republic

M. VERCHÈRE DE REFFYE, Minister Plenipotentiary, "Sous-Directeur des chancelleries et du contentieux" at the Ministry of Foreign Affairs;

M. Gaston BOURGOIS, Consul-General of France

His Majesty the King of the Hellenes

M. Raoul BIBICA-ROSETTI, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary;

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M. Massa-aki HOTTA, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.

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His Serene Highness the Prince of Monaco.

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The President of the Republic of Panama.

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The President of the Republic of Uruguay:

M Victor BENAVIDES, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council;

Dr. Alfredo DE CASTRO, Envoy Extraordinary and Minister Plenipotentiary to His Majesty the King of the Belgians and to Her Majesty the Queen of the Netherlands, Representative of Uruguay on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

The President of the United States of Venezuela

M. Manuel AROCHA, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary.

who, having produced their full powers, found in good and due form, have agreed on the following provisions:

Article 1.

1. In the present Convention, " narcotic drugs " shall be deemed to mean the drugs and substances to which the provisions of the Hague Convention of January 23rd, 1912, and the Geneva Conventions of February 19th, 1925, and July 13th, 1931, are now or hereafter may be applicable.

2 For the purposes of the present Convention, the word "extraction" connotes an operation whereby a narcotic drug is separated from the substance or compound of which it forms part, without involving any actual manufacture or conversion properly so called. This definition of the word "extraction" is not intended to include the processes whereby raw opium is obtained from the opium poppy, these being covered by the term "production".

Article 2.

Each of the High Contracting Parties agrees to make the necessary legislative provisions for severely punishing, particularly by imprisonment or other penalties of deprivation of liberty, the following acts—namely:

(a) The manufacture, conversion, extraction, preparation, possession, offering, offering for sale, distribution, purchase, sale, delivery on any terms whatsoever, brokerage, despatch, despatch in transit, transport, importation and exportation of narcotic drugs, contrary to the provisions of the said Conventions,

(b) Intentional participation in the offences specified in this Article,

(c) Conspiracy to commit any of the above-mentioned offences,

(d) Attempts and, subject to the conditions prescribed by national law, preparatory acts

Article 3

The High Contracting Parties agree to make the necessary legislative provisions for punishing such acts in their territory of jurisdiction in the territory of another High Contracting Party as if the offence had been committed in their own territory. The High Contracting Parties agree to make the necessary legislative provisions for punishing such acts in their territory of jurisdiction in the territory of another High Contracting Party as if the offence had been committed in their own territory.

Article 4

Each of the acts specified in Article 2 shall, if committed in different countries, be considered as a distinct offence.

Article 5.

The High Contracting Parties, whose national law regulates cultivation, gathering and production with a view to obtaining narcotic drugs, shall likewise make severely punishable contraventions thereof.

Article 6.

In countries where the principle of the international recognition of previous convictions is recognised, foreign convictions for the offences referred to in Article 2 shall, subject to the conditions prescribed by the domestic law, be recognised for the purpose of establishing habitual criminality.

Article 7.

1. In countries where the principle of the extradition of nationals is not recognised, nationals who have returned to the territory of their own country, after the commission abroad of any of the offences referred to in Article 2, shall be prosecuted and punished in the same manner as if the offence had been committed in the said territory, even in a case where the offender has acquired his nationality after the commission of the offence.

2. This provision does not apply if, in a similar case, the extradition of a foreigner cannot be granted.

Article 8.

Foreigners who are in the territory of a High Contracting Party and who have committed abroad any of the offences set out in Article 2 shall be prosecuted and punished as though the offence had been committed in that territory if the following conditions are realised—namely, that:

(a) Extradition has been requested and could not be granted for a reason independent of the offence itself;

(b) The law of the country of refuge considers prosecution for offences committed abroad by foreigners admissible as a general rule.

Article 9

1 The offences set out in Article 2 shall be deemed to be included as extradition crimes in any extradition treaty which has been or may hereafter be concluded between any of the High Contracting Parties.

2 The High Contracting Parties who do not make extradition conditional on the existence of a treaty or on reciprocity shall as between themselves recognise the offences referred to above as extradition crimes

3. Extradition shall be granted in conformity with the law of the country to which application is made.

convicted is not sufficiently serious.

Article 10

Any narcotic drugs as well as any substances and instruments intended for the commission of any of the offences referred to in Article 2 shall be liable to seizure and confiscation

Article 11

1. Each of the High Contracting Parties shall set up, within the framework of its domestic law, a central office for the supervision and co-ordination of all operations necessary to prevent the offences specified in Article 2, and for ensuring that steps are taken to prosecute persons guilty of such offences

2 This central office

(a) Shall be in close contact with other official institutions or bodies dealing with narcotic drugs;

(b) Shall centralise all information of a nature to facilitate the investigation and prevention of the offences specified in Article 2;

(c) Shall be in close contact with and may correspond direct with the central offices of other countries

3 Where the Government of a High Contracting Party is federal in character, or where the executive authority of its Government is distributed between central and local Governments, the supervision and co-ordination specified in paragraph 1 and the execution of the functions specified in (a) and (b) of paragraph 2 shall be carried out in conformity with the constitutional or administrative system thereof.

4. Where the present Convention has been applied to any territory by virtue of Article 18, the requirements of the present Article may be carried out by means of a central office set up in or for that territory acting in conjunction, if necessary, with the central office in the metropolitan territory concerned

5. The powers and the functions of the central office may be delegated to the special administration referred to in Article 15 of the Convention for limiting the Manufacture and regulating the Distribution of Narcotic Drugs of 1931.

Article 12.

1 The central office shall co-operate with the central offices of foreign countries to the greatest extent possible, in order to facilitate the prevention and punishment of the offences specified in Article 2

2. The office shall, so far as it thinks expedient, communicate to the central office of any country which may be concerned

(a) Particulars which would make it possible to carry out any investigations or operations relating to any transactions in progress or proposed,

(b) Any particulars which it has been able to secure regarding the identity and the description of traffickers with a view to supervising their movements,

(c) Discoveries of secret factories of narcotic drugs

Article 13

1. The transmission of letters of request relating to the offences referred to in Article 2 shall be effected.

(a) Preferably by direct communication between the competent authorities of each country or through the central offices, or

(b)
or by
request

justice of the two countries
of the country making the
request is made, or

(c) Through the diplomatic or consular representative of the country making the request in the country to which the request is made. For this purpose, the letters of request shall be sent by such representative to the authority designated by the country to which the request is made

2. Each High Contracting Party may, by communication to the other High Contracting Parties, express its desire that letters of request to be executed within its territory should be sent to it through the diplomatic channel

3. In case (c) of paragraph 1, a copy of the letter of request shall at the same time be sent by the diplomatic or consular representative of the country making the request to the Minister for Foreign Affairs of the country to which application is made

4. Unless otherwise agreed, the letter of request shall be drawn up in the language of the authority to which request is made or in a language agreed upon by the two countries concerned

5. Each High Contracting Party shall notify to each of the other High Contracting Parties the method, or methods, of transmission mentioned above which it will recognise for the letters of request of the latter High Contracting Party

6. Until such notification is made by a High Contracting Party, its existing procedure in regard to letters of request shall remain in force

7. The execution of letters of request shall not be subject to payment of taxes or expenses other than the expenses of experts

8. The present Convention shall be construed as an undertaking on the part of the High Contracting Parties to take all measures necessary to ensure that the provisions of the Convention shall be applied in all matters any form or methods of proof contrary to the provisions of the Convention otherwise than within the limits of their laws

Article 14

The present Convention shall not be subject to the general question of criminal jurisdiction as to the

Article 15

The present Convention does not affect the principle that the offences referred to in Articles 2 and 5 shall in each country be defined, prosecuted and punished in conformity with the general rules of its domestic law.

Article 16.

The High Contracting Parties shall communicate to the Secretary-General of the League of Nations the laws and regulations relating to the present Convention, and also an annual report on the effect of their application in their territories.

Article 17.

The present Convention shall apply to the dispute between the Netherlands and the United Kingdom, relating to the Statute of that Court, and, if any of the Parties to the dispute is not a Party to the Protocol of December 16th, 1920, to an arbitral tribunal constituted in accordance with the Hague Convention of October 18th, 1907, for the Pacific Settlement of International Disputes

Article 18

1. Any High Contracting Party may, at the time of signature, ratification or accession, declare that, in accepting the present Convention, he does not assume any obligation in respect of all or any of his colonies, protectorates, overseas territories or territories under suzerainty or mandate, and the present Convention shall not apply to any territories named in such declaration

receipt by the Secretary-General of the League of Nations.

3 Any High Contracting Party may, at any time after the expiration of the period of five years mentioned in Article 21, declare that he desires that the present Convention shall cease to apply to all or any of his colonies, protectorates and overseas territories or territories under suzerainty or mandate, and the Convention shall cease to apply to the territories named in such declaration one year after its receipt by the Secretary-General of the League of Nations

4. The Secretary-General shall communicate to all the Members of the League and to the non-member States mentioned in Article 19 all declarations and notices received in virtue of this Article.

Article 19.

invitation to the Conference which drew up the
the League of Nations shall have communicated :

Article 20

The present Convention shall be ratified. The instruments of ratification shall be transmitted to the Secretary-General of the League of Nations, who shall notify their receipt to all Members of the League and to the non-member States referred to in the preceding Article

Article 21.

1 As from January 1st, 1937, the present Convention shall be open to accession on behalf of any Member of the League of Nations or any non-member State mentioned in Article 19

2. The instruments of accession shall be transmitted to the Secretary-General of the League of Nations, who shall notify their receipt to all the Members of the League and to the non-member States mentioned in that Article

Article 22.

The present Convention shall come into force ninety days after the Secretary-General of the League of Nations has received the ratifications or accessions of ten Members of the League of Nations or non-member States. It shall be registered on that date by the Secretary-General of the League of Nations

Article 23.

Ratifications or accessions received after the deposit of the tenth ratification or accession shall take effect as from the expiration of a period of ninety days from the date of their receipt by the Secretary-General of the League of Nations.

Article 24

1. After the expiration of five years from the date of the Convention, it may be denounced by an instrument in the form of a declaration deposited with the Secretary-General of the League of Nations. The denunciation shall operate only as regards the Member of the League or non-member State on whose behalf it has been deposited

2. The Secretary-General shall notify all the Members of the League and the non-member States mentioned in Article 19 of any denunciations received

3 If, as a result of simultaneous or successive denunciations, the number of Members of the League and non-member States bound by the present Convention is reduced to less than ten, the Convention shall cease to be in force as from the date on which the last of such denunciations shall take effect in accordance with the provisions of this Article

Article 25

A request for the revision of the present Convention may at any time be made by any Member of the League of Nations or non-member State bound by this Convention by means of a notice

Parties agree to meet for the purpose of revising the Convention

CHINE	Hoo Chi-Tsai.	CHINA
COLOMBIE	<i>ad referendum</i> Rafael GUIZADO	COLOMBIA
CUBA	G de BLANCK	CUBA
DANEMARK	William BORBERG	DENMARK
ÉGYPTE	Edgar GORRA	EGYPT
ÉQUATEUR	Alex GASTELÚ	ECUADOR
ESPAGNE	Julio CASARES	SPAIN
ESTONIE	J KÕDAR	ESTONIA
FRANCE	P DE REFFYE G BOURGOIS	FRANCE
GRÈCE	Raoul BIBICA-ROSETTI A. CONTOUMAS	GREECE
HONDURAS	J. LÓPEZ PINEDA.	HONDURAS
HONGRIE	Sous réserve de ratification VELICS	HUNGARY
JAPON	Massa-	

TCHÉCOSLOVAQUIE

D^r Antonín KOUKAL

CZECHOSLOVAKIA

UNION DES RÉPUBLIQUES
SOVIÉTIQUES SOCIALISTES

G. LACHÉVITCH

UNION OF SOVIET
SOCIALIST REPUBLICS

URUGUAY

V BENAVIDES
Alfredo DE CASTRO

URUGUAY

VENEZUELA

ad referendum AROCHA

VENEZUELA

Copie certifiée conforme
Pour le Secrétaire général

Certified true copy
For the Secretary-General

*Conseiller juridique
du Secrétariat*

*Legal Adviser
of the Secretariat*

PROTOCOL OF SIGNATURE.

When signing the Convention of 1936 for the Suppression of the Illicit Traffic in Dangerous Drugs dated this day, the undersigned Plenipotentiaries, in the name of their Governments, declare to have agreed:

1. To China making acceptance of the Convention subject to the following reservation as to Article 9

"So long as the consular jurisdiction still enjoyed by the nationals of certain Powers in China is not abolished, the Chinese Government is unable to assume the obligations resulting from Article 9, involving a general undertaking by the Contracting Parties to grant the extradition of foreigners guilty of the offences referred to in that Article."

2. That the Netherlands make their acceptance of the Convention subject to the reservation that, according to the basic principles of penal law in the Netherlands, they are able to comply with sub-paragraph (c) of Article 2 only in circumstances where there is a commencement of execution

3. That India makes its acceptance of the Convention subject to the reservation that the said Convention does not apply to the Indian States or to the Shan States (which are part of British India).

CHINE	Hoo Chi-Tsai	CHINA
COLOMBIE	<i>ad referendum</i> Rafael GUIZADO	COLOMBIA
CUBA	G de BLANCK	CUBA
DANEMARK	William BORBERG	DENMARK
ÉGYPTE	Edgar GORRA	EGYPT
ÉQUATEUR	Alex GASTELU	ECUADOR
ESPAGNE	Julio CASARES	SPAIN
ESTONIE	J KÖDAR	ESTONIA
FRANCE	P DE REFFYE G BOURGOIS	FRANCE
GRÈCE	Raoul BIBICA-ROSETTI A CONTOUMAS	GREECE
HONDURAS	J LÓPEZ PINEDA	HONDURAS
HONGRIE	Sous réserve de ratification VELICS	HUNGARY

TCHÉCOSLOVAQUIE

Dr Antonín KOUKAL

CZECHOSLOVAKIA

UNION DES RÉPUBLIQUES
SOVIÉTIQUES SOCIALISTES

G LACHKEVITCH

UNION OF SOVIET
SOCIALIST REPUBLICS

URUGUAY

V. BENAVIDES
Alfredo DE CASTRO

URUGUAY

VENEZUELA

ad referendum: AROCHA

VENEZUELA

Copie certifiée conforme.

Pour le Secrétaire général:

Certified true copy.

For the Secretary-General.

*Conseiller juridique
du Secrétariat.*

*Legal Adviser
of the Secretariat*

FINAL ACT.

THE GOVERNMENTS OF AFGHANISTAN, THE UNITED STATES OF AMERICA, AUSTRIA, THE UNITED STATES OF BRAZIL, THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, BULGARIA, CANADA, CHILE, CHINA, CUBA, DENMARK, EGYPT, ECUADOR, SPAIN, FRANCE, GREECE, HONDURAS, HUNGARY, INDIA, IRAQ, THE IRISH FREE STATE, JAPAN, LIECHTENSTEIN, THE UNITED STATES OF MEXICO, NICARAGUA, NORWAY, PANAMA, THE NETHERLANDS, PERU, POLAND, PORTUGAL, ROUMANIA, SIAM, SWITZERLAND, CZECHOSLOVAKIA, TURKEY, THE UNION OF SOVIET SOCIALIST REPUBLICS, URUGUAY, THE UNITED STATES OF VENEZUELA, AND YUGOSLAVIA,

Having accepted the invitation extended to them in execution of a resolution adopted by the Council of the League of Nations on January 20th, 1936, for the purpose of concluding a Convention for the Suppression of the Illicit Traffic in Dangerous Drugs,

Have appointed the following delegates

AFGHANISTAN

Delegate

HIS EXCELLENCY GENERAL MOHAMED OMER KHAN, Delegate to the Assembly of the League of Nations, Deputy Permanent Delegate to the League of Nations

UNITED STATES OF AMERICA

Delegates:

MR. STUART J. FULLER, Assistant Chief of the Division of Far Eastern Affairs, Department of State, Representative of the United States of America on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs.

MR. HARRY J. ANSLINGER, Commissioner of Narcotics of the Treasury Department

Legal Adviser:

MR. FRANK X. WARD, Assistant Legal Adviser of the Department of State

AUSTRIA

Delegates:

HIS EXCELLENCY M. EMERICH PFLÜGL, Permanent Representative to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary.

DR. BRUNO SCHULTZ, former Vice-President of the Vienna Police, Representative of Austria on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

UNITED STATES OF BRAZIL

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

and all parts of the British Empire which are
not separate Members of the League of Nations

Delegates:

Mr. Oscar Follett DOWSON, C B E, Legal Adviser to the Home Office

Major William Hewett COLES, D S O., Representative of the United Kingdom on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs.

BULGARIA

Delegates:

His Excellency M. Nicolas MOMTCHILOFF, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary

M. Eugène SILIANOFF, Secretary of the Permanent Delegation to the League of Nations and Secretary of the Legation in Berne.

CANADA

Delegate:

Colonel C H L SHARMAN, C M G, C B E, Chief of the Narcotic Division of the Department of Pensions and National Health and Representative of Canada on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

Secretary:

Mr. Alfred RIVE.

CHILE

Delegate:

M. FRANCISCO HERNANDEZ JIMENEZ, Head of the Nutrition and Drugs Section of the Ministry of Health.

CHINA

Delegate:

His Excellency Dr Hoo Chi-Tsai, Director of the Permanent Office of the Delegation to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.

Substitute:

M. CHEN Ting, First Secretary of the Permanent Office of the Delegation to the League of Nations.

Secretary

M. Yone Ming LEE, Secretary of the Legation in Berne

CUBA

Delegate:

His Excellency M Guillermo de BLANCK, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council

DENMARK

Delegate

His Excellency M. William BORBERG, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary

Substitute:

EGYPT

Delegate:

M. Edgar GORRA, Royal Adviser, "Directeur du contentieux de l'Etat", Alexandria

ECUADOR

Delegate:

M. Alejandro GASTELÚ CONCHA, Secretary of the Permanent Delegation to the League of Nations, Consul-General of Ecuador in Geneva

SPAIN

Delegate:

M. Juho CASARES, Representative of Spain on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

Legal Adviser

M. Manuel LOPEZ REY, Professor of Penal Law

FRANCE

Delegate:

His Excellency M. DE REFFYE, Minister Plenipotentiary, "Sous-Directeur du contentieux et des chancelleries" at the Ministry of Foreign Affairs

Substitute:

M. Gaston BOURGOIS, Consul-General of France

GREECE

Delegate:

His Excellency M. Raoul BIBICA-ROSETTI, Permanent Delegate to the League of Nations, Minister Plenipotentiary

Substitute:

M. Alexandre CONTOUMAS, First Secretary of the Permanent Delegation to the League of Nations.

HONDURAS

Delegate:

His Excellency Dr. Julian LÓPEZ PINEDA, Permanent Delegate to the League of Nations, Chargé d'Affaires in Paris

HUNGARY

Delegate:

His Excellency M. László DE VELICS, Chief of the Delegation to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council

Substitute:

M. László BARTOK, First Secretary of Legation at the Permanent Delegation to the League of Nations

INDIA

Delegate:

Gordon Sidey HARDY, Esq., C.I.E., I.C.S., Vice-Chairman of the Advisory Committee on Traffic in Opium and Other Dangerous Drugs.

IRAQ

Delegate:

IRISH FREE STATE

Delegate:

Mr. Francis Thomas CREMINS, Permanent Delegate to the League of Nations

JAPAN

Delegate:

His Excellency Massa-aki HOTTA, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.

Experts:

M. Unji KONNO, Technical Expert of the Tokio Hygienic Laboratory.

M. Morikatsu INAGAKI, Expert attached to the Foreign Office

Secretaries:

M. Yoshiro SUGITA, Secretary of the Department of Overseas Affairs

M. Bushichiro OTAKE, Secretary of the Department of Justice.

M. Kumao NISHIMURA, Second Secretary of the Embassy in Paris

LIECHTENSTEIN

Delegate:

M. Camille GORGÉ, Counsellor of Legation, Chief of the League of Nations Section of the Swiss Federal Political Department.

Expert:

M. E. SCHEIM, Assistant to the Police Division, Swiss Federal Department of Justice and Police.

UNITED STATES OF MEXICO

Delegate:

M. Manuel TELLO, First Secretary of the Mexican Foreign Service, Representative of Mexico on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

NICARAGUA

Delegate:

His Excellency M. Francisco Tomás MEDINA, Permanent Delegate to the League of Nations, Minister Plenipotentiary

NORWAY

Delegate:

M. Einar MASENG, Permanent Delegate to the League of Nations.

PANAMA

Delegate:

Dr Ernesto HOFFMANN, Permanent Delegate to the League of Nations

THE NETHERLANDS

Delegates.

M. J. H. DELGORGE, Adviser of the Government of the Netherlands on international opium questions and Netherlands Representative on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

Dr. J. R. M. VAN ANGEREN, Director, Chief of the Police Section at the Ministry of Justice

Substitute and Secretary:

J. A. H. G. BELLAKERTS VAN BEEKLAND, Assistant Editor to the *Monthly Bulletin of the League of Nations*.

PERU

Delegate:

M. Enrique TRUJILLO BRAVO, Engineer

POLAND

Delegate:

His Excellency Dr. Witold CIOPIŃSKI, former Minister of Public Health, Chairman of the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

Technical Adviser:

M. Kazimierz TREBICKI, First Secretary at the Delegation to the League of Nations

PORTUGAL

Delegates:

His Excellency Dr. Augusto DE VASCONCELOS, Permanent Delegate to the League of Nations, Minister Plenipotentiary

His Excellency Professor José CALIXTO DA MATTA, Rector of the University of Lisbon

Secretary:

M. Henrique DA GUERRA QUARESMA VIANNA, Chargé d'Affaires to the League of Nations, Counsellor of Legation

ROUMANIA

Delegate:

His Excellency M. Constantin ANTONIAD, Envoy Extraordinary and Minister Plenipotentiary to the League of Nations

Substitute:

M. Dino CASTERNIK, Secretary of the Delegation to the League of Nations

SIAM

Delegate:

His Excellency Phya RAJAWANGKON, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary to the Court of St. James

Substitute:

Luang BHRU SAWALI, Secretary of Legation at the Legation in London

Secretary:

Luang CHAMKONG DITAKAR, Secretary of Legation at the Legation in London

SWITZERLAND

Delegate:

M. Camille Gysler, Counsellor of Legation, Chief of the League of Nations Section at the Federal Political Department

CZECHOSLOVAKIA

Delegate:

Dr. Antonín KOUKAL, Adviser at the Ministry of Justice

TURKEY

Delegate:

M Numan Tahur SEYMEN, Consul-General at Geneva

UNION OF SOVIET SOCIALIST REPUBLICS

Delegate:

M Georges LACHKEVITCH, Legal Adviser at the People's Commissariat for Foreign Affairs

URUGUAY

Delegates:

His Excellency M. Victor BENAVIDES, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.

His Excellency Dr Alfredo DE CASTRO, Envoy Extraordinary and Minister Plenipotentiary to His Majesty the King of the Belgians and to Her Majesty the Queen of the Netherlands, Representative of Uruguay on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

UNITED STATES OF VENEZUELA

Delegate:

His Excellency M Manuel AROCHA, Permanent Delegate to the League of Nations, Envoy Extraordinary and Minister Plenipotentiary.

YUGOSLAVIA

Delegate:

His Excellency Dr Ivan SOUBBOTITCH, Permanent Delegate to the League of Nations

Experts:

M Boško DJORDJEVITCH, Secretary to the Royal Ministry of Trade and Industry

Dr. Vladimir MANOJLOVITCH, Secretary of the Permanent Delegation to the League of Nations.

Participating at the Conference as Observers.

FINLAND

M Helge VON KNORRING, First Secretary of Legation

LATVIA

M Kārlis KALNINŠ, First Secretary of Legation

Participating at the Conference in an Advisory Capacity and as Experts

International Criminal Police Commission

Mr Norman KENDAL, C B E, Assistant Commissioner of the Metropolitan Police, London

Dr Bruno SCHULTZ, former Vice-President of the Vienna Police, Representative of Austria on the Advisory Committee on Traffic in Opium and Other Dangerous Drugs

who accordingly assembled at Geneva.

The Council of the League of Nations appointed as President of the Conference:

M. Joseph LIMBURG, Member of the Council of States of the Netherlands.

The Conference has appointed as Vice-President:

M. DE REFFYE, Minister Plenipotentiary, "Sous-Directeur du contentieux et des chancelleries" at the Ministry of Foreign Affairs of the French Republic

The functions of Secretary-General to the Conference were assumed by.

M. Eric Einar EKSTRAND, Director of the Opium Traffic and Social Questions Sections, representing the Secretary-General of the League of Nations

In the course of a series of meetings between June 8th and June 26th, 1936, the instruments hereinafter enumerated were drawn up:

I. CONVENTION OF 1936 FOR THE SUPPRESSION OF THE ILLICIT TRAFFIC IN DANGEROUS DRUGS

II. PROTOCOL OF SIGNATURE OF THE CONVENTION

The Conference also adopted the following:

I. INTERPRETATIONS.

1 It is understood that the provisions of the Convention, and in particular the provisions of Articles 2 and 5, do not apply to offences committed unintentionally

2 Article 15 is to be interpreted in the sense that the Convention does not in particular affect the liberty of the High Contracting Parties to regulate the principles under which mitigating circumstances may be taken into account.

II. RECOMMENDATIONS

1. The Conference,

Recalling that the International Opium Conference of 1912, determined to bring about the gradual suppression of the abuse of opium, inserted in the International Opium Convention of

: of urging the countries

r other than medical or
a view to the abolition

of such use of opium.

2
of their r
are guilty,
treaty applicable contains a reservation on the subject of the extradition of nationals

3. The Conference recommends the High Contracting Parties to create, where necessary, a specialised police service for the purposes of the present Convention.

4 The Conference recommends that the Advisory Committee on Traffic in Opium and Other Dangerous Drugs should consider the question whether it is desirable that meetings of the representatives of the central offices of the High Contracting Parties should take place in order to ensure, improve and develop international co-operation as provided for in the present Convention, and, should occasion arise, to give an opinion to the Council of the League of Nations on the subject.

	BERG	DENMARK
	Edgar GORRA	EGYPT
GUATE TEUR	Alex GASTELÚ	ECUADOR
ESPAGNE	Julio CASARES Manuel LÓPEZ REY	SPAIN
RANCE	P DE REFFYE G. BOURGOIS	FRANCE
GRÈCE	Raoul BIBICA-ROSETTI A CONTOUMAS	GREECE
URAS	J. LÓPEZ PINEDA	HONDURAS
NGRIE	VELICS	HUNGARY
INDE	G HARDY	INDI
ÉTAT LIBRE D'IRLANDE	F. T. CREMINS.	IRISH FREE STATE
JAPON	Massa-aki HOTTA	JAPAN
MEXIQUE	Manuel TELLO.	MEXICO
PANAMA	D ^e Ernesto HOFFMANN	PANAMA
BAS	DELGORGE G. BEELAERTS VAN BLOKLAND	THE NETHERLANDS